JUNE 10, 1944

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Railway Age

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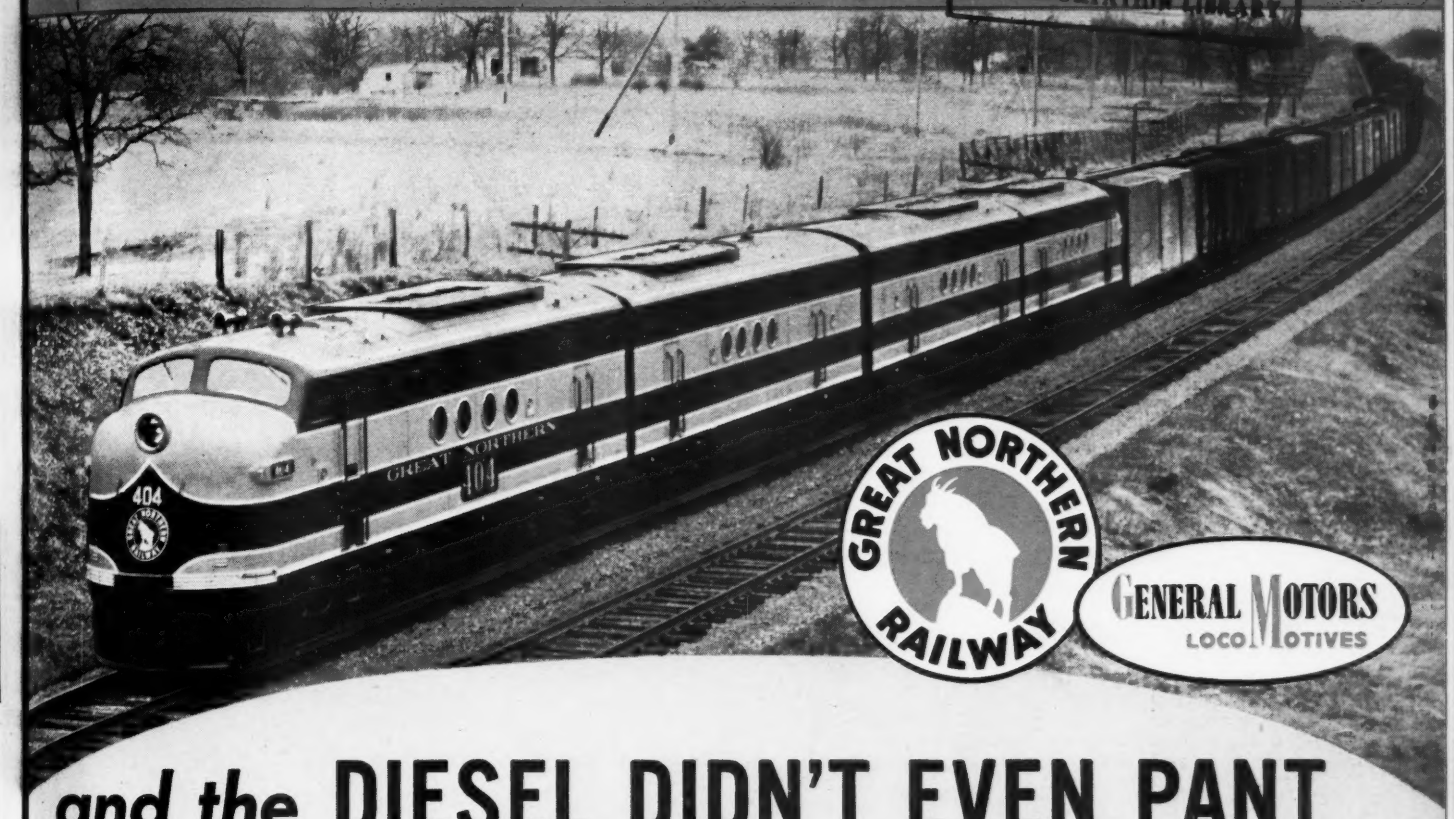
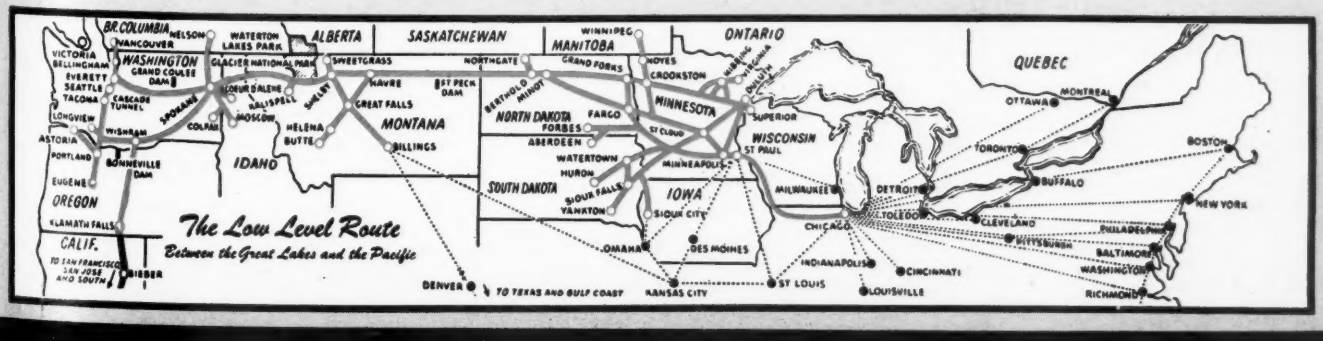


and the DIESEL DIDN'T EVEN PANT

When Great Northern's No. 404, one of several new General Motors 5400 Hp. Diesel Freight Locomotives, made its first trip over the Montana Rockies from Havre to Whitefish (256 miles), it pulled 90 heavily loaded freight cars, totaling 4,225 tons, in approximately twelve hours. In comparison with motive power previously used, this freight Diesel hauled 1,000 more tons and cut almost four hours off regular schedule. "Over one stretch of 188 miles, this train climbed more than half a mile — and the Diesel didn't even pant!" *(Comment by Paul Light in the St. Paul Pioneer Press.)*

These dependable GM Freight Diesels will greatly strengthen Great Northern motive power in providing the ultimate in modern rail transportation.

★ ***LET'S ALL BACK THE ATTACK — BUY MORE WAR BONDS*** ★



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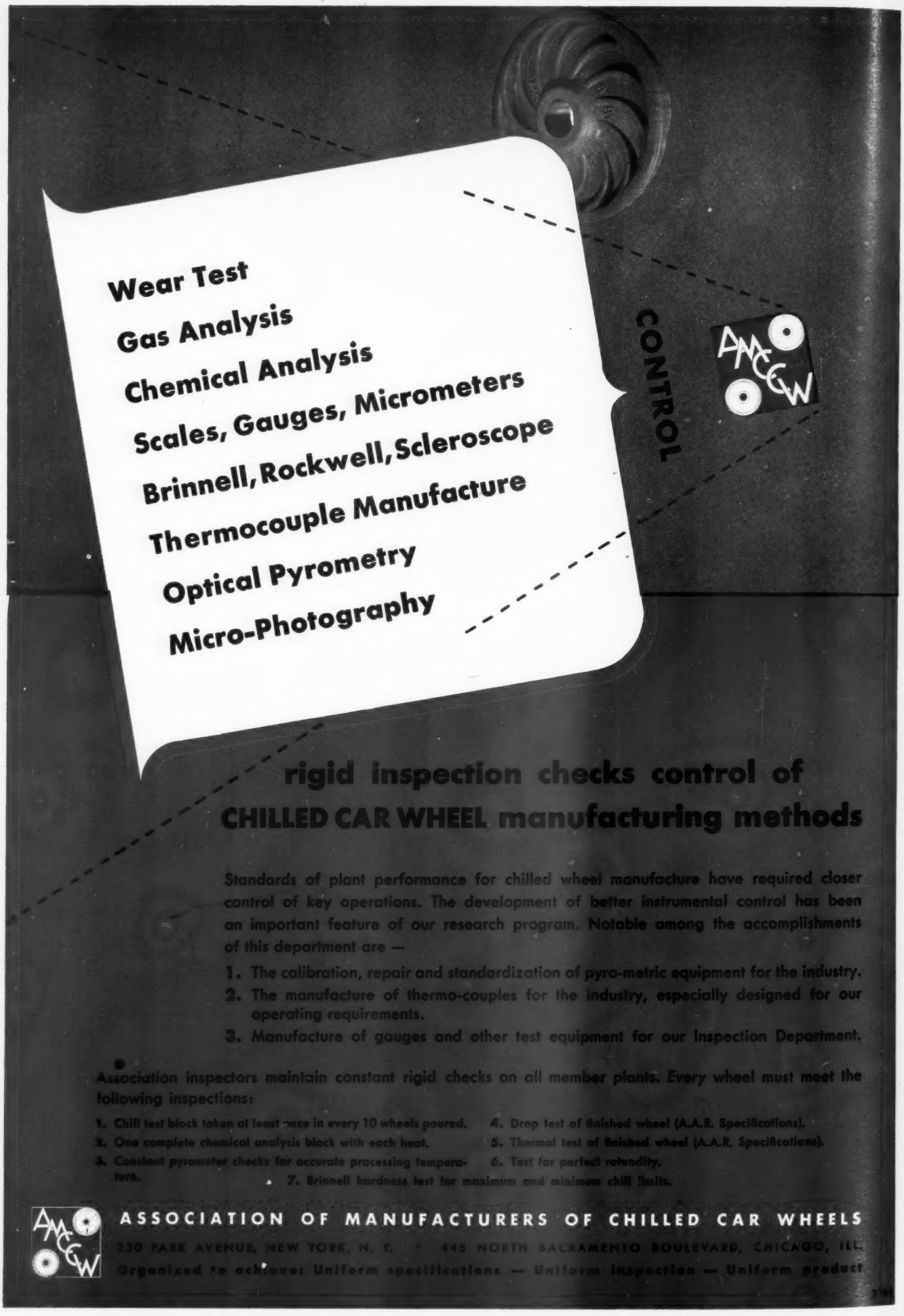
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When an unusual method of doing business is given a practical application and turns out to be richly productive of benefits to all concerned—wider knowledge and appreciation of this new approach, and how it was achieved, are matters of general importance. The railroads have this kind of story to tell, and the purpose of this article is to tell it.

Mexicans Mitigate Labor Scarcity ***1112***

A detailed account of the exacting agreements under which some 40,000 importees have been contracted for. 28 railroads have put more than 31,000 such laborers at work in various departments and 9,000 more are expected this summer. Contract renewals have been around 35 per cent.

How to Attain Transport Economy ***1119***

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★

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SAVE TIME

with the signal that rides in the cab!

IN many sections of the country, particularly during certain seasons of the year, storms or prevailing fogs create operating problems which make "on-time" train performance difficult of accomplishment. "Union" Cab Signals have demonstrated their effectiveness in overcoming these obstacles to efficient rail transportation.

Constantly visible to the engine crew, the cab signal is continuously controlled to indicate the condition of the track in advance. Conditions requiring reduction or permitting acceleration of speed are instantly signaled to the crew. As a result, trains can be operated at the maximum permissible speed at all times despite adverse weather and with complete safety.

Avoidance of delay is of vital importance to rail transportation whether under the compelling necessities of war or to meet the problems of peacetime competition. Cab signals have established their value today and will prove to be the needed signals of tomorrow. . . . May we explain in detail?

UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PA.

The Week at a Glance

ELECTRONICS PROGRESS: The Santa Fe has appointed an electronics engineer and expects to "fully explore and develop the use of electronics," especially for communication with, between, and upon trains—and "for remote control of switches from locomotives." The Rock Island on June 5 began the operation of micro-wave radio station W-10-XTH at Blue Island, thus initiating the extensive experimental communications program for which it has received authorization from the Federal Communications Commission. Further details are given in the news pages.

●

ACCIDENTS: I. C. C. statistics on accidents for the first four months, reported in the news pages, show a small but gratifying decrease in train accidents compared to last year; and total fatalities from all causes were higher by only about 1 per cent. Grade crossing accidents in 1943 (as another report in our news pages discloses) resulted in a considerable decline in casualties from the preceding year. But still the propaganda campaign against the railroads for an alleged lack of perfection in safety continues—a conspicuous example being an inept article in the current Harper's Magazine. A peculiarity, and not an especially engaging one, about a goldfish-bowl business like railroading, is that any number of government reports on specialized phases of the business are available to any Tom, Dick or Harry who, reading a few of them, frequently persuades himself that he knows more about the business than competent men who have spent their lives in it.

●

MORE THAN ONE DUTY: Safety in railroading is not solely a matter of preventing collisions as the Harper's writer seems to suppose. The railroad man, unlike the self-elected "expert," has to strive to prevent other classes of casualties too—and he also has to move the trains, not always with all the refinements that prosperity would provide either; which makes his task just a little more complex than that of a scribe who sets up a specialist's goal and is resentful that all other objectives are not subordinated to it.

●

LIGHT C. P. R. LOCOMOTIVES: Angus shops last month completed the first locomotive to be built there since 1931. It is a Pacific of 34,000 lb. tractive force (illustrated and briefly described in this issue), and has dimensions and weight to allow it to operate within the most restrictive track and bridge limits on the entire C.P.R. system. A twin of this engine will be turned out at Angus this month and the two units will be thoroughly tested. The company foresees the early need to replace several hundred locomotives in light service, and is aiming at designs most effective to this end.

●

HELP FROM MEXICO: There are already 31,000 citizens of Mexico working on 28 railroads under an imposingly detailed contract, with governments of the two countries acting as agents and watchful guardians of the interests and welfare of the visitors. An article herein reports the involved details of the obligation which the employing carriers have assumed, and reveals that they would be happy to hire under the same conditions, twice the 40,000 so far authorized.

●

MANAGERIAL DISCOVERY: The method by which the railroads have contrived to produce a volume of transportation service far beyond their assumed capacity—and out of all proportion to the increase in their facilities—may well be a discovery of revolutionary significance in the science of management. Such is the suggestion put forward in an article in this issue, which sets down the components of this astonishingly productive formula. In what other large industry has such far-reaching organization been perfected to make the facilities of the business as a whole available to individual companies where needs are most acute? In what other large industry has cooperation with customers been so closely established that the industry has complete information well in advance of all the large tasks its patrons are going to call for? And where else do customers know so much about the business they patronize, and try so hard and so fruitfully to increase its output?

●

'20's INVESTMENTS HELPED: The article ascribes full credit to the large capital expenditures which the railroads made in the 'Twenties when they were still able to attract new investments in fixed plant. Without these improvements—for which private capital deserves (but has not yet received) the generous thanks of a grateful nation—transportation service would now be entirely inadequate to the demands of the kind of war we must wage to win. But still—transport performance has gone far beyond the improvements in physical facilities—and this "surplus" of performance cannot be credited otherwise than to managerial ingenuity. Since this novel procedure has been so productive in this aspect of transportation, mightn't it be worth-while to see whether a like formula would work to similar advantage elsewhere?

●

AN ENGINE DIST. GETS CTC: The L. & N.'s busy 178-mile Montgomery-Mobile engine district now has centralized traffic control on all of its single track (there being only two short segments of double track, which are automatically signaled). An article herein maps and fully describes the installation.

●

RAILROADERS & INVASION: At this writing, the Allied armies are not far enough onto the Continent to use railroad supply lines—but our Army railroaders are on the job in Britain with plenty of equipment and skill, to follow the invasion with railway service just as fast as it advances. The indispensability of efficient railroads to the kind of mass warfare our forces must wage has been proclaimed by all authorities (see quotation from Major George Fielding Eliot in the May 27 *Railway Age*, page 1016); and we are again reminded by an editorial in this issue of the "habitual performance of the impossible" by American soldier-railroaders in Italy.

MARX IN A STIFF SHIRT: Business people who limit their pondering of trends in economics and politics to the somewhat less than discerning interpretations offered by the brethren who lead their own associations, would find it revealing to look into the observations of some thorough scholars in these fields—men who have the time and faculties with which to think deeply, and no motive for muffling their candor. The leading editorial herein recommends to this end the findings of Herbert Dorau and Joseph Schumpeter, who make it clear that socialization of property can come about, and is coming about, by action of alleged friends of private enterprise. Business men have their attention diverted by the bogey of government *ownership*, while the progress of actual socialization goes forward constantly beneath their very noses under the *form* of private property.

●

BUDD ON TRANSPORT ECONOMY: There is a brief article by the Burlington's president in this issue, on the way to achieve postwar economy in transportation. Characteristically, he reduces a mighty and complex subject, without loss of essential content, to a few observations so simple that no one save the unwilling can fail to understand them. Economy in transport costs and rates is achieved by maximizing the load on efficient plant—not by hot-housed multiplication of facilities so that concentration of traffic is insufficient to yield the savings of mass production. There remains plenty of productive capital improvement to be done on the railroads (with large resultant contributions to employment and industrial activity); and such improvement will occur if arbitrary and inimical political action does not supervene.

●

UNION AIDS TRUCKING: Teamsters' Union Vice-President Dave Beck is going all out against "barriers" to trucks; and urges his membership to bestir itself politically to "present the case" of the long-haul truckers to the American people. As an editorial herein suggests, Mr. Beck's description of his objective as the correction of "ignorance and prejudice" is slightly euphemistic. If those qualities were eliminated, the truck on really long hauls (except for specialized traffic such as household goods) would vanish from the highways—which is the reverse of Mr. Beck's purpose. Whatever opinion may be held, however, of this union leader's concern for the public interest, he is at least extraordinary in that he has made the discovery that a prosperous employer makes a prosperous union.

●

PASSENGER CAR AGE: Class I railroads own about 38,000 passenger train cars, of which 50 per cent are more than 25 years old. On this fact, plus the assumption that postwar travel demands are likely to be substantial, Allen Clarke of A. C. F. at St. Charles in a paper reported herein, foresees a large demand by the railroads for new passenger equipment in the postwar years. From this basis he proceeds to examine the design characteristics which the new cars should take.

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PROVIDE

STRENGTH—

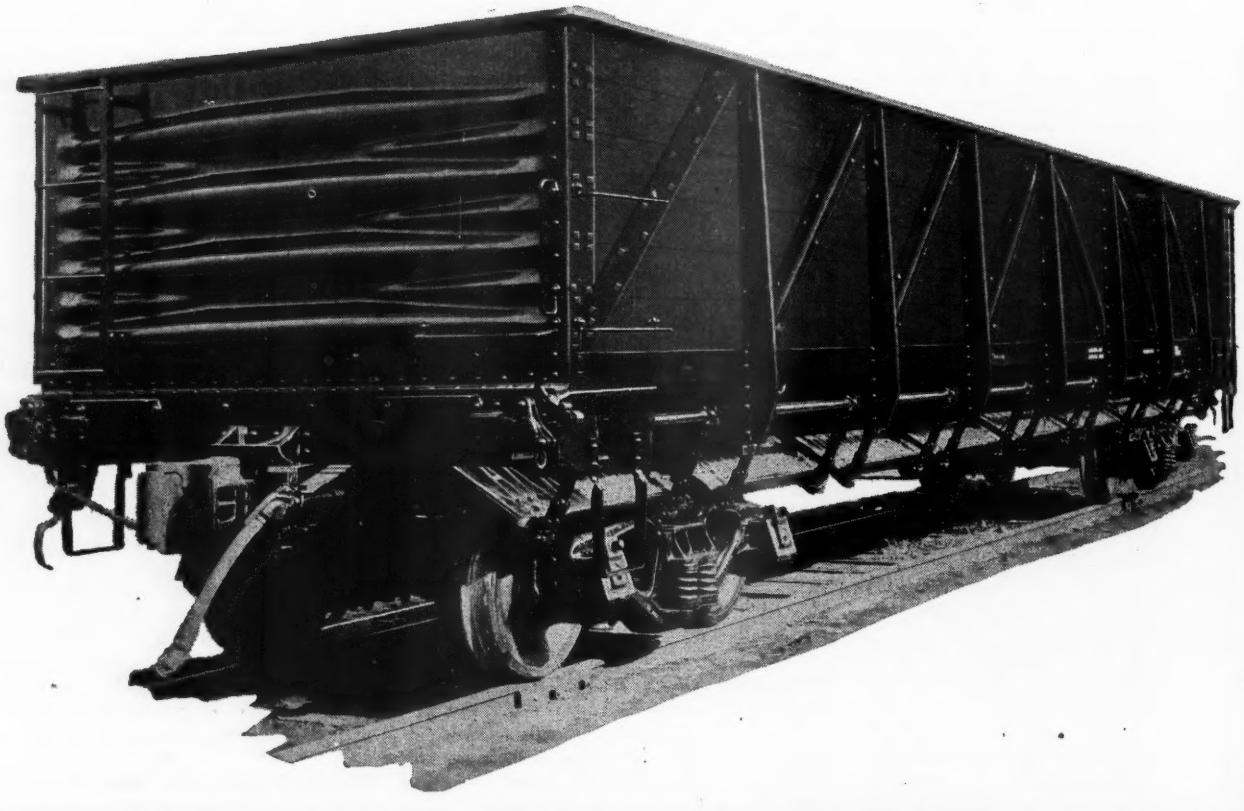
UNIFORM OVER ENTIRE SURFACE.

RUGGEDNESS

A MUST, WITH INCREASED LOADS AND SPEEDS.

RESILIENCY

TO CUSHION SHIFTING LOAD SHOCKS AND PROTECT CAR SUPERSTRUCTURE.



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RAILWAY AGE

Socialization as the Road to Socialism

Two eminent university economists recently have shown how our government, business management and labor unions are pushing us toward socialism while most of our leaders in government, business and labor unions are professing, perhaps sincerely, a desire to preserve private enterprise. One of these economists is Dr. Herbert B. Dorau of New York University, whose recent address before the "Institute of Transportation" on the effects of subsidies was published in *Railway Age* of June 3. The other is Dr. Joseph Schumpeter of Harvard, who has written a book entitled, "Capitalism, Socialism, Democracy." Anybody who reads carefully what Drs. Dorau and Schumpeter have to say probably will conclude that it will require much more than such discussion and planning as now prevail to save private enterprise.

Dr. Dorau powerfully emphasized that transportation is in much less danger of being socialized by adoption of government ownership, which almost nobody now advocates, than by subsidization of most kinds of carriers, which so many, especially business men, favor. He said, in part:

> "The essence of socialization is subsidy. . . . It is a means for making us think some things are relatively cheap and other things are relatively expensive. . . . An honest price system is an indispensable requisite to the successful and continued operation of a system of free enterprise. . . . Prices which do not reflect the present comparative costs of goods and service . . . are economically dishonest. . . . I should view public operation . . . on a business basis of meeting all costs with less alarm than a widespread system of subsidies and counter-subsidies of private enterprise . . . with all the government interference such a partnership brings. . . . No industry can long or effectively compete with industries operating with the benefit of socialized cost."

These are the views of an expert and entirely impartial observer of what is occurring and is threatened in transportation. And yet there are many spokesmen of business who advocate what they call "free enterprise," oppose government ownership, and at the same time, for their own selfish advantage, advocate subsidization of all the competitors of the railways. They are much more dangerous to private enterprise than advocates of government ownership.

Dr. Schumpeter foresees the destruction of private enterprise largely by the policies of private enterprise itself. He emphasizes the tendency of an increasing part of total business to be done by large corporations, and of the control of the management of corporate property to be lost by its owners, the stockholders. This trend is accentuated by the increasing tendency of management to accede to demands of government and labor unions, largely in disregard of the effects on dividends, which are the only form in which the owners of corporate property can get any return on their investment. The railroads afford a striking example of this trend and its effects, which tends to cause socialization of property without any ostensible change in ownership.

Drs. Dorau and Schumpeter make plain that the only way to prevent socialism is effectively to oppose every policy of government, business or labor that tends to cause *socialization* of property still privately owned by treating it as if the private owners have no rights that government, management and labor unions must respect. Obviously, the right of stockholders to adequate dividends must be respected as much as the right of government to adequate taxes and the right of labor to adequate wages, or private enterprise will be as completely destroyed by the attrition of socialization as it would by the formal adoption of socialism.

The railways, from $9,054 million of gross earnings collected in 1943, paid employees $3,304 million in wages, paid government $1,851

Efficiency FOR VICTORY

million in taxes, and paid stockholders—i.e. owners —only $216 million in dividends. When private property has become socialized to that extent, what its owners have to fear is not that it may become government-owned, but that it may remain socialized under ostensible private ownership.

Union to Do Battle for Long-Haul Trucking

There has come to our desk an attractively-printed brochure entitled "The Problem Before Us," with the sub-caption, "Steps our great trucking industry must take to insure its rightful place in the future life of America." The author is Dave Beck, vice-president, International Brotherhood of Teamsters, and the booklet is said to be a speech Mr. Beck delivered in April to the Washington Motor Transport Association at Wenatchee.

Mr. Beck is a union leader who understands that his union depends for its prosperity on the volume of business enjoyed by the employers of its members —and Mr. Beck is out to get more business for them. He says:

"We [meaning the members of his union] must awaken our state legislators and our congressmen to the essential part that this industry is playing. . . . Government must remove the arbitrary and artificial barriers that have been erected selfishly to stifle its growth. . . .

"Competing types of transportation must stop appealing to the ignorance and prejudice of uninformed legislators and congressmen to injure our industry; they must be prevented from using chicanery to erect barriers that impede the free flow of commerce on the nation's highways. . . . There is no legitimate excuse for the destructive practices that the representatives of the railroads have adopted to block honest competition. . . .

"We must develop the kind of administrative policy, by our common efforts, that will stop such nefarious proceedings in our legislative halls. We must carry our story to the great industries whose products we purchase. . . . Our drivers, helpers, checkers, office help, dockmen, traffic personnel, managers—and the bankers and the merchants, the corner grocers and druggists in thousands of communities that depend entirely on truck transportation—must be given the facts. . . . When we intelligently present our case to the American people the shackles which now prevent our rightful progress will be stricken off."

Translating these euphemisms of injured innocence into plain English, what Mr. Beck is announcing is, clearly, a large-scale political campaign by his union and affiliated interests, the objective of which is to reduce the pittance that truck operators now pay toward the upkeep of the highways and to remove the restrictions on truck magnitude which even now, in most states, permit 30-ton (and larger) leviathans, upwards of 45 ft. in length, to imperil the lives of those who venture on the highways in the family sedan. Politics has already gone far toward turning the public highways over to the long-haul truckers as a private place of business, at only nominal compensation; and more politics, as now proposed by the teamsters' union, can doubtless do an even more complete job.

Whatever one may think of the quality of Mr. Beck's accuracy as a reporter of facts, or of his respect for the public interest in maintaining transportation as a self-supporting rather than a dole-nourished business —it is difficult not to admire him as a union leader who has made the unusual discovery that the incomes of his members come only from the industry that employs them; and that the greatest service a union can do for the welfare of its members is to increase their employers' business and revenues. There are employees of other industries whose outlook for future employment and prosperity would be brighter than it actually is, if their union leaders possessed some of the zeal for the well-being of the industry which employs them that Mr. Beck is demonstrating for the over-the-road part of the trucking business.

There are members of Mr. Beck's union, employees of truckers making local deliveries, who stand to lose their present jobs in proportion as he is successful in diverting traffic from railroads to over-the-road trucks. But Mr. Beck is doubtless little concerned about local deliveries, because that is a service which can't escape the truck, and the virtual monopoly of jobs exercised therein by the teamsters' union. What Mr. Beck is out to do is to enlarge the field of employment which makes members for the teamsters' union, by reducing the field of employment which makes members for the railway unions.

New Shop Tools Needed

To meet increasing demands for maintenance work in locomotive and car repair shops a number of railroads purchased a substantial volume of new shop machinery and tools in 1943; installations are now being made of machinery approved in 1944 budgets, and undoubtedly this improvement program will be accelerated after the war. The replacement of obsolete and wornout machinery in American plants and railroad shops constitutes the largest potential market for machine tools now and after the war.

An authorized representative of the machine-tool building industry is quoted as saying in Pittsburgh early last month that United States manufacturers have produced more metal-cutting capacity in the last four years than in the preceding 40 years and that, not counting machines shipped abroad, we now have in this country about 1,700,000 machine tools which may be compared with 958,000 tools in 1939, or roughly double that of a pre-war year. Machine manufacturers are naturally concerned about this great excess supply of war machine tools and the adverse effect it is sure to have, in greater or less degree, on their business after the war.

Railroad experience in acquiring either new or used machines built for war production has not been entirely satisfactory. In some instances, prices quoted for new machines have been almost double those charged for equivalent units before the war. Used machinery, listed as being in good condition, has been investigated

and found to have little effective service life left. Enough machine tools built for war-production purposes are known to include substitute materials not desirable in tools which are expected to give a full life span of useful service, however satisfactory they may have proved in meeting the war emergency, to suggest the need of exercising extreme care in the selection of any of these machines for service in railroad shops.

Even at bargain prices the experience of some railroads in purchasing the second-hand machine tools after the close of World War I was such that they are likely to steer clear of such tools. From now on the railroads are quite likely to be faced more and more with the opportunity to acquire machine tools built for war production. Their interests will probably best be served by making certain that any tools which they acquire, either now or after the war, are of such type and quality as are required to render a full life span of efficient service on railway work.

Railway Men and the Invasion

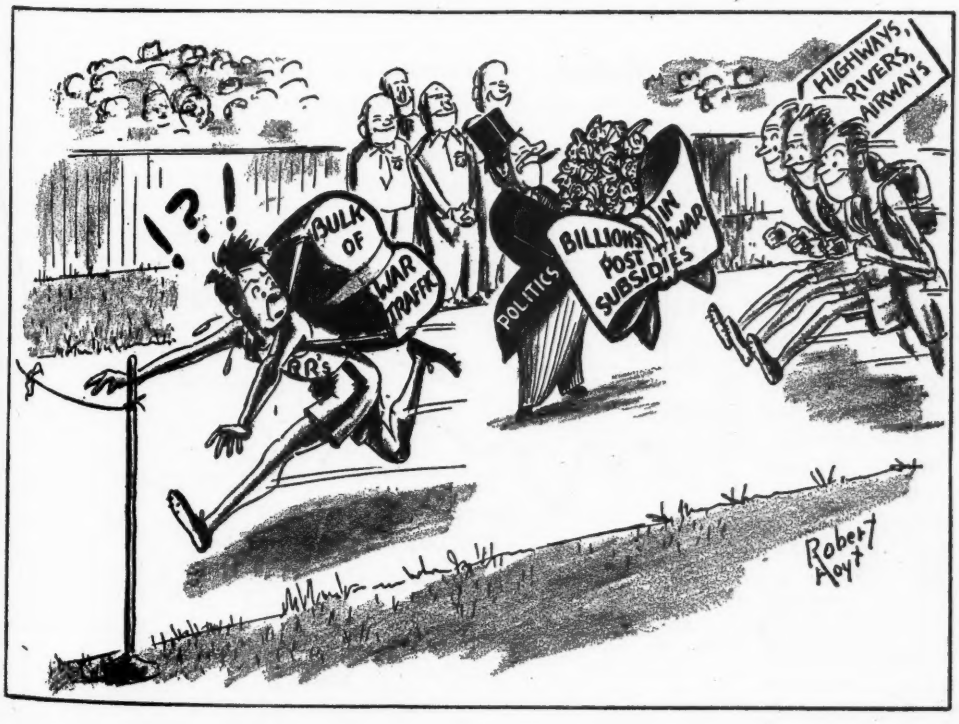
When word was received last Tuesday morning that the Allied Armies had launched their long-expected invasion of Western Europe, a new chapter was opened in the epic story of co-operation extended to the armed services by railway men from this country. While it is too early to secure any details of the part that they are taking in this all-out effort to bring the Nazis to defeat, the record made by American railway men in accompanying the first combat troops to Sicily last summer and in having trains operating in support of these troops in the beachhead areas within a few hours of the landing of the first troops, indicates the intimate part that these railway forces are playing in support of our fighting men.

In no previous war in history has transportation played so important a part. And in this activity American railway men have achieved great distinction. In North Africa, in Sicily, in Italy, in Iran, in India, in Alaska and New Caledonia, American railway troops are providing essential service that is winning commendation in the highest circles. Numerous members of these battalions have been cited for individual achievement and in our issue of June 3 we published notice of a special award of merit to the entire Military Railway Service in Italy "for excellence in discipline, performance and merit," the highest award yet to be received. In making this award, Lt. Gen. Mark W. Clark, commanding the Fifth Army, stated that "with unswerving concentration on the task ahead, your officers and men have labored often under fire in planning, constructing and operating the rails to the forward areas, virtually to the Army front lines. Time and again crucial materials and reinforcements could not have been brought into action except for the outstanding performance of the Military Railway Service. It is with genuine pleasure therefore that I pay tribute to this outstanding service by the honorary award of the Fifth Army Plaque and Clasp to the Allied Force Military Railway Service for exceptional meritorious service in the movement of supplies for the Fifth Army."

This award carried a touch of sentiment also for it was so timed as to be presented on the fifty-fifth birthday of the commanding officer of the Military Railway Service in Italy, Brig. Gen. Carl R. Gray.

In rendering this vitally important and highly specialized service, these railway men are making a contribution in keeping with the best traditions of the railways, meeting each problem as it arises with a determination that, in the words of General Clark, "has habitually performed the impossible." It is with the knowledge of this spirit that we await word of the part that railway men are playing in backing up our troops in France and other areas in which the invasion may be launched in Western Europe.

The Winner Has a Right to Be Puzzled



Here's a "Managerial Revolution"

A technique has been developed which enables hundreds of separate railroads and thousands of customers to co-operate as an integrated team, with no loss of local initiative. The result is that a plant which has been virtually "frozen" has delivered the goods in astonishing excess of its presumed capacity

By J. G. Lyne

WHEN an unusual method of doing business is given a practical application and turns out to be richly productive of benefits to all concerned—wider knowledge and appreciation of this new approach, and how it was achieved, are matters of general importance. Perhaps this new way of getting things done would prove equally productive in other situations. The railroads have this kind of a story to tell, and the purpose of this article is to tell it. This method may be called "producer-customer-government co-operation," and it is a principal factor in the success attained by the railroads with only minor increases in plant investment, in moving a quantity of traffic far beyond most pre-war estimates of their capacity.

Making Less Produce More

The performance of the railroads in the movement of the present war's traffic has frequently been set forth quantitatively. In 1943, ton-miles exceeded those of 1918 by 80 per cent and passenger-miles increased 106 per cent. Ton-miles in 1943 were equal to those of 1918 and 1939 combined. Freight car ownership, however, was 5 per cent less in 1943 than in 1918, and passenger car ownership was 7 per cent less. There were 33 per cent fewer locomotives in 1943 than in 1918 (although the tractive force per unit was 50 per cent greater). Aside from much heavier loading of cars, each unit of rolling stock had attained far greater *mobility* in 1943 than in 1918; daily miles per freight car, for example, increased 96 per cent.

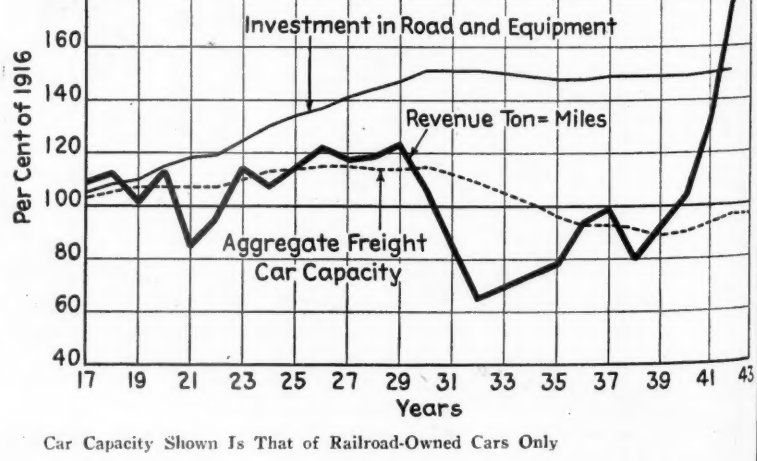
Much of the credit for this achievement has been properly ascribed to the $7 billion increase in the railroads' capital investment between the two wars—represented by larger (though fewer) cars and locomotives, heavier rail, easier grades, more efficient yards, advances in signaling. A factor of at least equal importance, which is the subject matter of this article, has so far been little acclaimed. What it amounts to, in substance, is the perfection by the railroads of a managerial technique and organization for the co-operative control of car movement and utilization. This technique is novel in that it affords the advantages of centralized supervision, but also widely diffuses knowledge, responsibility and control, in a manner to enlist the informed co-operation of all participants.

This method had its birth and early infancy at the time of the first world war; and in the meantime has achieved vigorous and effective maturity—without having attracted much attention from anybody outside the immediate family circle.

Until 1917, there had not been evolved an effective inter-railroad organization for the control and distribution of freight cars—the Department of Justice had not been friendly to co-operation which would in any degree mitigate competition between railroads. The carriers, nevertheless, did establish in 1917 a "Commission on Car Service," composed of experienced transportation officers, which ameliorated to some degree the serious congestion of traffic then occurring—but this effort was not sufficiently successful to prevent the railroads being taken over for government operation at the end of December in that year. The "Commission on Car Service" then became a branch of the United States Railroad Administration, and, since the return of the railroads to private operation in 1920, has been in continuous existence as the Car Service Division of the Association of American Railroads. The present degree of perfection achieved in the distribution and control of railway rolling stock, in the national interest, is, thus, no sudden discovery, but is the product of 27 years' cumulative experience.

The legalistic obstacles to inter-railroad co-operation for the distribution of freight cars in the interest of the nation as a whole, rather than in that of individual competing carriers, were removed in part by the enactment in 1917 of the so-called "Esch Car Service Act," which empowered the Interstate Commerce Commission to issue orders affecting the distribution of cars—which the railroads themselves could not promulgate without violation of the law. The powers of the I. C. C. over car distribution were further strengthened in the Transportation Act

How Railroad Performance Has Outrun Facilities
(Showing Contrast Between Two War Periods)



Car Capacity Shown Is That of Railroad-Owned Cars Only

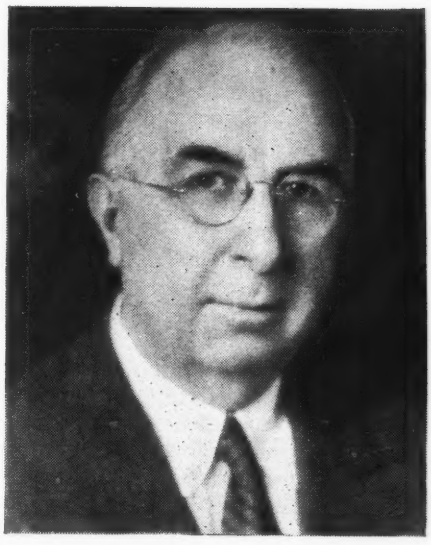
of 1920 (Sec. 1 (15), (16), (17))—and the Commission's Bureau of Service, which gives effect to these provisions, has by its close collaboration with the Car Service Division, largely removed the practical difficulties arising from the railroads' legal inabilities to co-operate without violating the anti-trust laws.

Why "Priorities" Won't Work

The intolerable congestion in freight traffic on the railroads in 1917 arose primarily—apart from the lack of adequate inter-railroad control of car distribution—from the loading of cars, especially of government freight, without provision for their unloading at destination; and from the decentralized issuance of "priority orders" by all branches of the military establishment. Practically all government freight had a "priority" attached to it, directing the railroads to give it preferred movement—regardless of its relative importance and whether the shipments were needed immediately or not till months later.

Because so many loaded cars were sent to the Atlantic Seaboard, without provision having first been made for unloading them at destination, there was, late in 1917, in that area an accumulation of 200,000 loaded cars which could not be unloaded.

Railroads cannot be operated successfully under a system of "priorities"—because, if congestion exists to a degree giving rise to a demand for such "priorities," the additional switching of cars necessary to sort the "priority" cars out of trains for preferred handling inevitably magnifies the switching which must be done—thus adding to the congestion and delays to traffic in yards.



Pioneers in the Development of Inter-Railroad Car Control and Shipper Collaboration

M. J. Gormley as Car Service Agent for the American Railway Association in 1917, Took Part in the First Effort to Systematize Troop Movements. As Head of the Car Service Division from 1921 to the Early '30's He Led the Development of Centralized Car Control and in Enlisting the Aid of Shippers and the Military. He Is Now Executive Assistant, A. A. R.

W. C. Kendall, Like M. J. Gormley, Has Had Experience in Railroad-Customer Collaboration Embracing Both Wars, and the Intervening Years. He Managed the Car Service Section of the R. R. Administration in War I and Has Headed the Car Service Division, A. A. R., Since '33

In 1918, under the federal Railroad Administration, the serious congestion of freight which had existed in 1917 was reduced—primarily because the Railroad Administration was able to do what the private railroads were not, i. e., impose a "permit" system upon government departments, whereby government freight would not be received until assurance was given that it could be unloaded promptly at destination. The utilization of freight cars, thus, was improved under the regime of the Railroad Administration—but it attained none of the spectacular results of recent times, because there were still lacking some essential ingredients. Among these absent qualities the most important was the understanding collaboration of private shippers and receivers, and of local railroad officers. Likewise, while government freight was controlled, the efficiency obtainable when both shipper and consignee fully appreciate the part they can play in a team-work job of ultimate transportation performance was still a long way off.

Centralization, But Not Co-operation, in War I

Centralized authority had been established, but decentralized collaboration had not yet come into being. Also, there still had to be further developed the knowledge and the system for effective nation-wide freight car control and distribution, on the part of the car-control officers themselves. They were experienced transportation men, but they had but recently come from individual railroads, and the technique of dealing with hundreds of carriers on a nation-wide scale was a new kind of job, the niceties of which could not be mastered in a few months.

How Systematic Troop Movement Began

A hopeful and effective beginning was, nevertheless, made in the art and science of nation-wide car control as long ago as 1917 and 1918—and the present perfection to which this work has been carried thus represents, not revolutionary innovation, but a progressive building on the foundations laid at that time. It is a significant fact that M. J. Gormley and W. C. Kendall, who have had so much to do with car service arrangements bearing such rich fruit during the present crisis, were also leaders in this activity during the 1917-18 conflict and were continuously associated with it during the intervening period.

The accumulation of experience which is today providing effective utilization of freight cars has been proceeding uninterruptedly for 27 years. Progress in the rational control of troop movements also dates back to 1917. Probably the first systematized movement of

troops on a carefully prepared plan—so characteristic of the current mobilization—occurred in 1917 during World War I. At that time Army regulations provided no centralized control of troop movements via civilian transportation agencies. Units which were to be shifted were given appropriate orders, and arrangements for their transportation was a duty devolving upon the quartermaster of each unit, who dealt with local railroad officers. Under such an approach there could not be, except by inadvertence, an even distribution of traffic on the railroads, either in time or among available routes—and, hence, orderly schedules and the most effective use of facilities was impossible.

At that time Major General Thomas H. Barry was in command of the Army's Central Department at Chicago (embracing territory from Ohio as far west as Wyoming). M. J. Gormley (now executive assistant, Association of American Railroads) was general agent at Chicago for the American Railway Association. In this area the Army had the job of moving 86,000 National Guardsmen to camps, mostly in the South, at a time when there was also a large movement of draftees to cantonments. Serious congestion seemed inevitable, under the existing procedure of providing for troop movements.

The Army Co-operated From the Start

Mr. Gormley approached General Barry with a proposal that the General's office take over the ordering of troop movements in this area. "You tell us in advance when each unit will be ready to move, and let us tell you when we will move it"—such was the suggestion, and General Barry agreed to it, issuing the orders to remove responsibility for movement from control of local National Guard officers to his office, and giving direction of the actual train schedules to Mr. Gormley. Before the movement took place, General Barry was succeeded in the command of the Central Department by Major General Carter, Retired, but the latter was in full accord with the decision to give the new method a thorough trial.

The task of advance planning was not too simple. In Ohio alone there were 20,000 National Guardsmen to move and not a whole regiment from one place; the railroads had to plan to assemble the troops by battalions, and even by companies, so each regiment would move as a unit. A railroad man widely acquainted among National Guard colonels in the state was assigned the task of communicating with each of them to inform them of the proposed plan—eliminating so far as practicable any chance of misunderstanding. Complete consists of necessary equipment, and detailed schedules for each train, were prepared by Mr. Gormley's office—not only with the end in view of avoiding equipment shortage, but timed and dispersed to avert congestion of any one route; and also to avoid unnecessary cross-hauling of empty equipment returning to reload. Instructions were issued in complete detail, by mail, to the railroads concerned—no one of them being called upon to accommodate an excessive volume of such traffic in a limited time.

In all, some 860 such "advices" were mailed to the officers of participating railroads by Mr. Gormley, setting forth the details and exact timing of the movements each railroad would be called upon to make, empty and loaded. The 86,000 soldiers were hauled to camp within 5 days, without a hitch; average trip per train, 1,000 miles. There were 270 trains, yet no one line of railway had to handle more than one regiment per day, and no camp had to receive more than one regiment per day.

It was feared that some of the commandants of National Guard regiments would be backward in conforming to the new regime and might attempt to exercise their former prerogative of directing train movements, for the purpose of halting en route for parades; and the transportation officers of individual railroads were asked to notify the A. R. A. office of any incipient threat of this kind. There were only one or two such attempts—which were promptly corrected by the Central Department command at Chicago.

Such was the relatively modest beginning of the collaboration between the railroads and the armed forces which has been so enormously productive of efficient transportation of personnel and supplies during the present conflict.

Troop Movement Further Perfected

This method of handling troops was further developed in World War I, so that, in this important branch of railroad wartime service, the movement was systematic and satisfactory. How much farther this technique has been perfected to handle the vastly larger troop movement in the present war was described in the *Railway Age* of April 15, 1944, page 719. That article, entitled "Troop-Train Cars Get Little Rest," reveals all the essential characteristics of the collaborative technique which has yielded such astonishing fruit in the way of maximum transportation performance from a plant of "frozen" magnitude, viz., (1) the fullest co-operation between the railroads and users of the service (especially in the interchange of information); (2) centralized supervision of all movements; (3) decentralized responsibility for performance. It is a method which gives just about *all of the advantages which have ever been claimed for both centralized and decentralized authority.*

Railroad officers having responsibility for car service had acquired experience during World War I which gave them a lively conception of the requirements for successful transportation of maximum traffic under conditions of national emergency; and individual railroads had also learned the necessity, at such a time, of subordinating concern for the welfare of individual carriers to effective service by the whole industry for protection of the national interest.

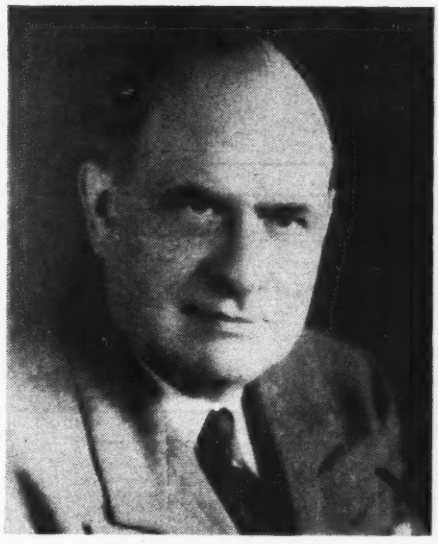
Profiting From Lessons of War I

After World War I and its aftermath had passed into history, there remained the impressive task of generalizing throughout the railroad industry the lessons learned by the railroad officers directly in contact with such facts as the foregoing; and the still more formidable job of enlarging the wisdom of the users of transportation to incorporate these lessons in their attitude and practice. Both the armed services and the shipping fraternity were in a receptive frame of mind to such a message as this. The Army desired no repetition of the transportation difficulties it had experienced in World War I and the shippers had no hankering for an encore of the miseries they endured under government operation of the railroads. And, of course, all railroad officers were favorably inclined toward accepting any subordination of individual interests which would be necessary to eliminate the danger of government operation. The atmosphere, in short, was distinctly favorable to an effort to put into effect the costly lessons which World War I had taught.

In 1921 Mr. Gormley went to Washington as chairman of the Car Service Division, and in 1923 he was invited to lecture at the War College on the essentials of military transportation in war-time. A 25-minute presentation was followed by 2½ hours of questions, and

thus was advanced by a significant further step the now-renowned railroad and Army collaboration—probably the most productive mutual relationship into which either institution has ever entered.

Thereafter, until actual preparations for the present war were begun in 1939, Mr. Gormley addressed each class of officers in attendance at the War College. He told them of his successful experience in handling of troops at Chicago—and of the penalty the nation paid during World War I for lack of systematized control of transportation: 200,000 freight cars under load, which could not be unloaded, and anchors waiting in cars at Hog Island for ships for which the keels had not yet been laid. In addition to complete indoctrination of practically all the ranking personnel of the Army and the Navy in the principles of successful military transportation in 16 years of repeated lectures at the War College by Mr. Gormley, the armed services perfected the detail of their knowledge by sending committees of their number for more intensive study and inquiry at the Car Service Division headquarters in Washington.



He Showed the Customers How Co-operation Would Help Them

Donald C. Conn, Manager of the Public Relations Section, Car Service Division in Early '20's, Was Instrumental in Arousing the Interest of the Shipping Public and in the Organization of the Regional Shippers Boards. He Is Now Executive Vice-President, Transportation Assn. of America

Lectures on Transport to the Military

Further dissemination of these principles was made at the Army's Industrial College (where problems of supplies of war materials were studied) and, of course, by means of the Regional Shippers Advisory Boards. These boards, initiated in 1923, quickly produced results in the shape of giving the railroads the advance information they needed to put an end for all time to the perennial "car shortage" which had previously occurred each fall at the time of the peak in the grain movement. The shipping community, given tangible advantages from the activity of these Boards, persisted in its interest in them, even through the depression of the 'Thirties when railway patrons had little to worry about concerning the adequacy of the supply of transportation. This steady contact through the years between transportation suppliers and users—giving each a better understanding of the other's requirements—developed by years of practice into a reliable mechanism for specific advance planning to meet demands for transportation.

The substance of Mr. Gormley's message to students at the War College—after showing them from his experience the effectiveness of advance knowledge of traffic demands in enabling the railroads to meet them completely—was as follows:

A. Let all concerned understand that there is not going to be any shortage of transportation; all they have to do is provide the railroads with the available advance information as to what their specific requirements will be, and the railroads will fulfill them.

B. Cars must not be loaded until it is positively known that arrangements have been made to unload them promptly at destination.

The Car Service Division, following World War I, was not an office adequately organized or staffed to assume the duties it is exercising at the present time. Its specific function is the policing of the "car service rules" of the Association of American Railroads—the inter-railroad contractual arrangement which, with some minor exceptions, permits the cars of any railroad on the North American continent to proceed to any destination on any railroad in any other part of the continent, thus avoiding costly transfer of lading. The "car service rules," together with standardization in essential characteristics of the cars themselves, constitute the mechanism by which over 1,000 individual railroad companies are converted, in substance, into a unified, continental system of transportation.

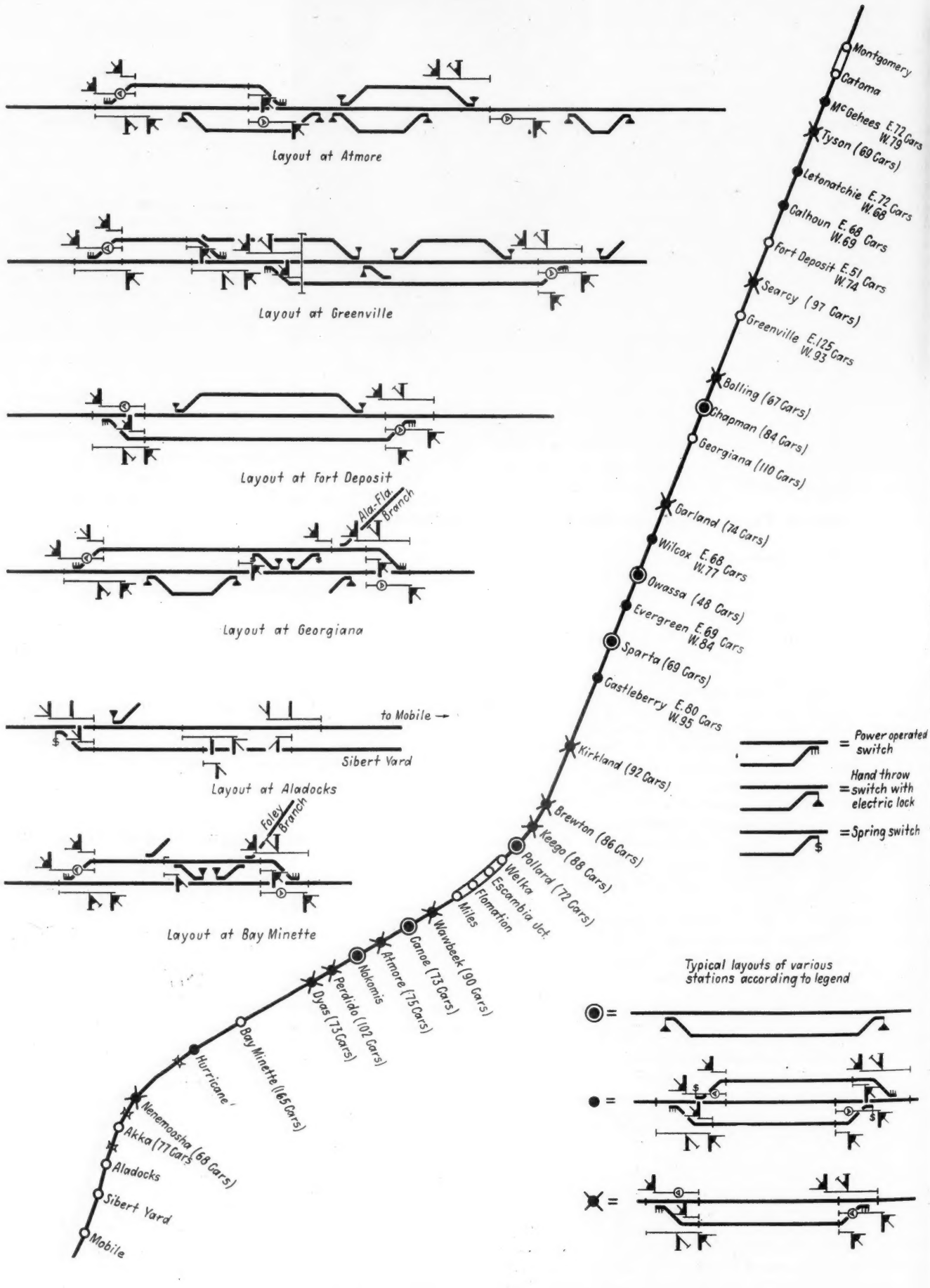
The main provisions of these rules have to do with the return of cars to the owning railroad when they are made empty on another line. When there is no congestion of traffic or emergency condition to meet, the work of policing obedience to these rules is of routine character. When any untoward condition arises, however, the Car Service Division is authorized to suspend or modify the customary routine observance of the car service rules to whatever extent may be deemed necessary. The railroad industry conceives its responsibility to be the provision of transportation wherever and whenever it is needed—and the proprietary interest of individual railroads in the cars they own is recognized by them to be a consideration distinctly secondary to this primary objective.

Aid of Civilian Shippers Is Enlisted

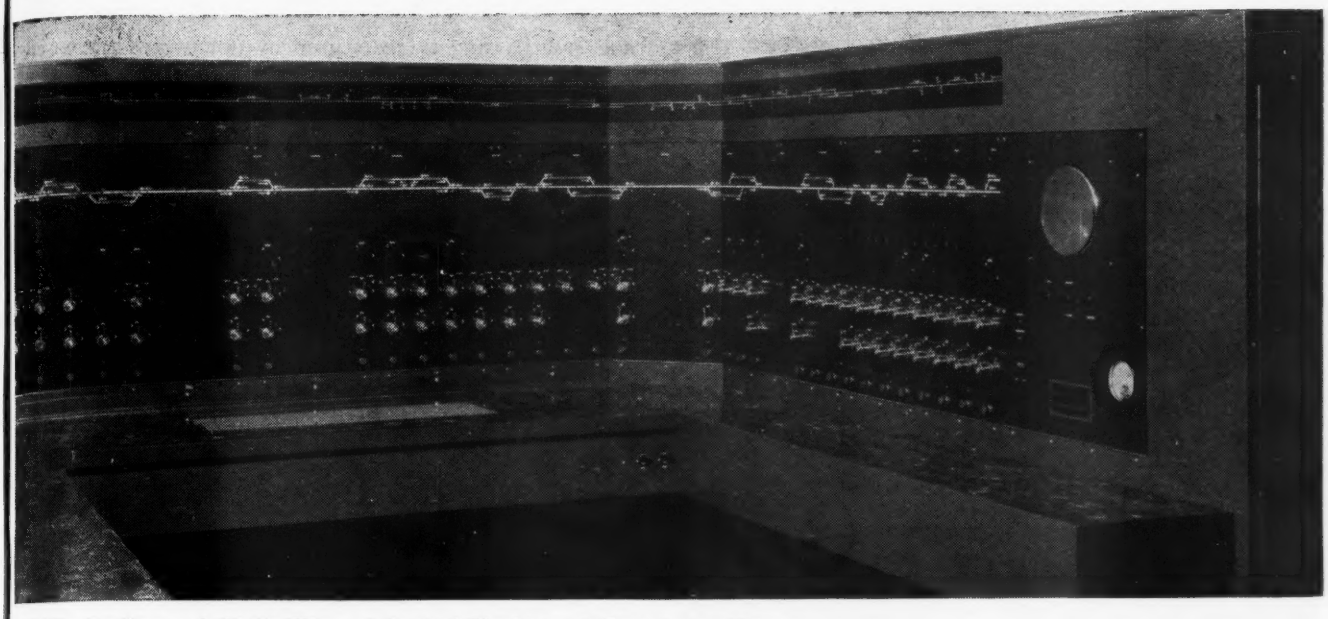
Crises or unusual congestion in transportation usually affect a number of railroads, and not just one, and meeting such conditions is a job for collaboration rather than individual action. The Car Service Division is the agency through which such collaboration is given effect. The development of this division into a nation-wide organization, adequately staffed to give it the thousands of local contacts required for reliable foreknowledge of traffic conditions—so advance preparation may be put in hand to meet them—began in 1923 with the establishment of the regional shippers advisory boards.

These "boards" are, rather, in point of fact, regional associations of shippers and receivers of freight, with a membership embracing all those railway patrons who care to participate in their activities.

[The second and concluding part of this article will appear in next week's Railway Age. It will give further details of the functioning of the Shippers Boards and the Car Service Division, and summarize the accomplishments of this novel managerial method in yielding the benefits of both centralized and decentralized management.]



Map and Detail Layouts of Project as a Whole



Middle Section and Right Wing of Control Machine at Georgiana, Ala.

C. T. C. on L. & N. Engine District

50 daily trains are expedited on 178-mile Mobile-Montgomery line (with only two short stretches of double track), when all single track gets C. T. C.

THE Louisville & Nashville has installed centralized traffic control on the 178-mile engine district between Montgomery, Ala., and Mobile, which is a part of its through route between Cincinnati, Ohio, and New Orleans, La. Double track extends 4 miles south from Montgomery to Catoma, from which point single track extends 110 miles to Welka, which is the north end of a six-mile section of double track through Flomaton, Ala., to Miles. Beyond this point, the line is single track for 55 miles to Sibert Yard, which is about two miles north of the passenger station in Mobile.

The power switches and semi-automatic signals on the single track between Catoma and Welka are controlled from a C. T. C. machine at Georgiana, which is approximately midway in this 110-mile section. The 56-mile section between Miles and Sibert Yard at Mobile is controlled from a C. T. C. machine at Mobile. On these two sections of single track, all trains are governed by signals—indications of which supersede the superiority of trains for both opposing and following movements on the same track. On double track between Welka and Miles, trains operate under automatic signal protection.

48-52 Trains Per Day

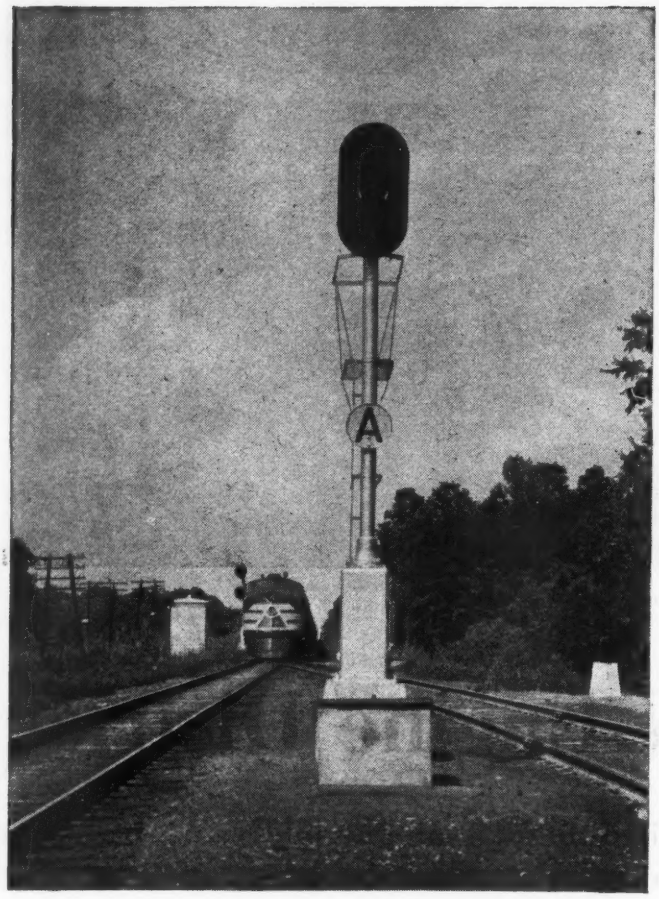
Seven passenger trains are scheduled in each direction daily between Montgomery and Mobile, and during the last year, some of these trains have been running in two sections almost every day. The schedules include four through freight trains in each direction daily and a local freight in each direction daily except Sunday. Extra freight trains are operated as required. An average of 48 to 52 trains are operated daily.

Throughout most of this territory, the grade is slightly rolling, with short sections ranging up to 0.8 per cent. The rating for the Class J3 locomotives is 2,080 tons, and for the Class J4 locomotives, is 2,400 tons. The curvature is comparatively light, with a maximum of 3 deg. In general, therefore, the conditions are favorable for handling trains at high sustained speeds on the territory between Montgomery and Hurricane. Through passenger trains are scheduled to run the 110 miles between Catoma and Welka in about 2 hr. 20 min. while through freights cover this distance in about 4 hr. 50 min.

Between Hurricane and Sibert, 15 miles, the railroad crosses five draw-bridges; the maximum speed limit over these bridges is 15 m. p. h. As a result, average train speeds are low in this section, and about 30 min. is required for passenger trains and about 45 min. for freight trains.

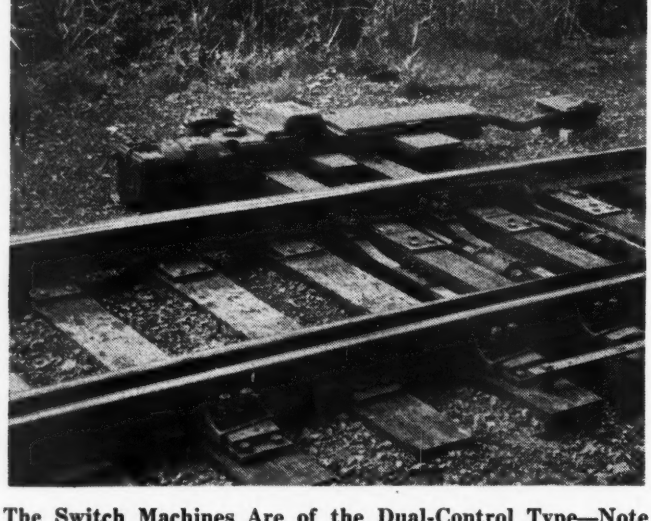
From Georgiana, Ala., a single-track branch line known as the Alabama-Florida branch, extends southeast 100 miles to Graceland, Fla. The traffic on this line includes one local passenger train and a local freight each way daily except Sunday. From Flomaton, Ala., a branch line extends south 43.7 miles to Pensacola, Fla., where connection is made with a line extending 160.6 miles east to Chattahoochee, Fla. Three first-class trains and a freight train are operated daily each direction between Flomaton and Pensacola.

A second branch line extends north from Flomaton 112 miles to Selma, Ala. One passenger train is operated each way daily and one freight train is operated each way daily except Sunday. The Foley Branch extends from Bay Minett 36 miles to Foley, on which one mixed train is operated each way daily.



Signals at a Typical End of a Siding

In the C. T. C. territory, single passing tracks with power switch machines at both switches, are located at stations as indicated by the legend on the accompanying diagram. At Greenville all four switches of the two passing tracks are equipped with power machines so that trains in either direction can enter or depart at any switch. In the lap layouts at McGehees, Letohatchie, Calhoun, Wilcox, Evergreen, Castleberry and Hurricane, one passing track is used by northward trains and the other is used by southward trains. The trains enter their respective passing tracks at the outlying switches, which are equipped with power switch machines, and depart from the passing tracks at the lap switches, which are equipped with spring mechanisms. Similar spring mechanisms are installed at the end of double track at Catoma, Welka and Miles, as well as at the yard lead switch connecting to the main line at Aladocks. The C. T. C. territory as a whole includes 50 electric switch machines and 18 spring switches.



The Switch Machines Are of the Dual-Control Type—Note Adjustable Rail Braces on the Crossties

At 12 short sidings, which are used only by work trains or by local freight trains when setting out or picking up cars, hand-throw switch stands were left in service but electric locks were applied to these switches. Similarly, electric locks were applied to 21 other main-line hand-throw switch stands on crossovers or spur tracks. Thus, a total of 45 electric switch locks are included in the C. T. C. territory.

C. T. C. Control System

The control of the power switches and semi-automatic signals, as well as the return of indications to the control machines, is accomplished by the General Railway Signal Company's Type-K, Class-M shunt-type line code system, using two line wires. One such circuit extends from the control office at Georgiana north to Catoma, and a second circuit extends south from Georgiana to Welka. A third circuit extends from the control office at Mobile to Miles. These three circuits are carried on new No. 6 AWG 40 per cent Copperweld bare wire installed for the C. T. C. code system. It is so arranged that these three circuits can be coupled together to provide a through circuit for a voice frequency telephone if this should be found necessary or desirable.

As shown in one of the illustrations, the panels of the control machine at Georgiana are set at an angle to form a "U", so that the man in charge can reach any of the levers without leaving his chair. The panel of the control machine at Mobile is one straight section 100 in. long. Each of these machines has an automatic train-graph which records the operations of trains when they pass the OS sections at the various power-operated switches.

The machine at Georgiana has 47 levers for controlling semi-automatic signals, and 34 levers for controlling power switches. Similarly, the machine at Mobile has 22 levers for signals, and 16 levers for power switches. These machines are equipped with the conventional forms of indications to repeat the operations of switches and signals. In addition to indicating the occupancy of all portions of the main tracks, the illuminated track diagram also has tokens which can be used to indicate occupancy of the passing tracks.

Changes in Automatic Signaling

Prior to the installation of centralized traffic control, automatic block signaling had been in service on this division for years. Three-position upper-quadrant semaphores were in service between Montgomery and Carpenters, and color-light signals were used between Carpenters and Mobile. As a part of the C. T. C. project, the semaphore signals were removed, Type-SA searchlight intermediate automatic signals being installed on the section from Catoma to Welka and at such locations as were required by present-day braking distances. On the section between Miles and Mobile, the existing color-light intermediate automatic signals were relocated as

required. The semi-automatic signals at the various passing tracks are all new searchlight-type signals.

At the head-block locations, special lamps with 8⅜-in. lunar white lenses and 19½-in. backgrounds are mounted on the sheet-metal instrument house near the switch. These motor car indicator lamps are so located that they display an indication into the block toward the next passing siding, and are lighted so long as no line-up is in effect for a train to proceed from the adjacent stations to the station at which the said indicators are located.

With this system of information, a man on a motor car watches the signals when between stations. When departing from or approaching a passing track he observes the motor car indicators. With such an arrangement, the man in charge of the C. T. C. control machine is instructed not to line up for trains sooner than necessary; otherwise the men in the field cannot figure closely on the time at which trains may be expected.

This C. T. C. was planned and installed by signal forces of the Louisville & Nashville, under the direction of W. H. Stilwell, signal engineer, the major items of equipment being furnished by the General Railway Signal Company. The centralized traffic control was placed in service in sections as the construction program progressed, the final portion being placed in service on April 4. The saving in train time was apparent on the various sections as soon as they were completed and placed in service. Complete information on the benefits in train operation will be determined by study after the entire project has been in service for a few months.

Canadian Pacific Builds Light Passenger Engines

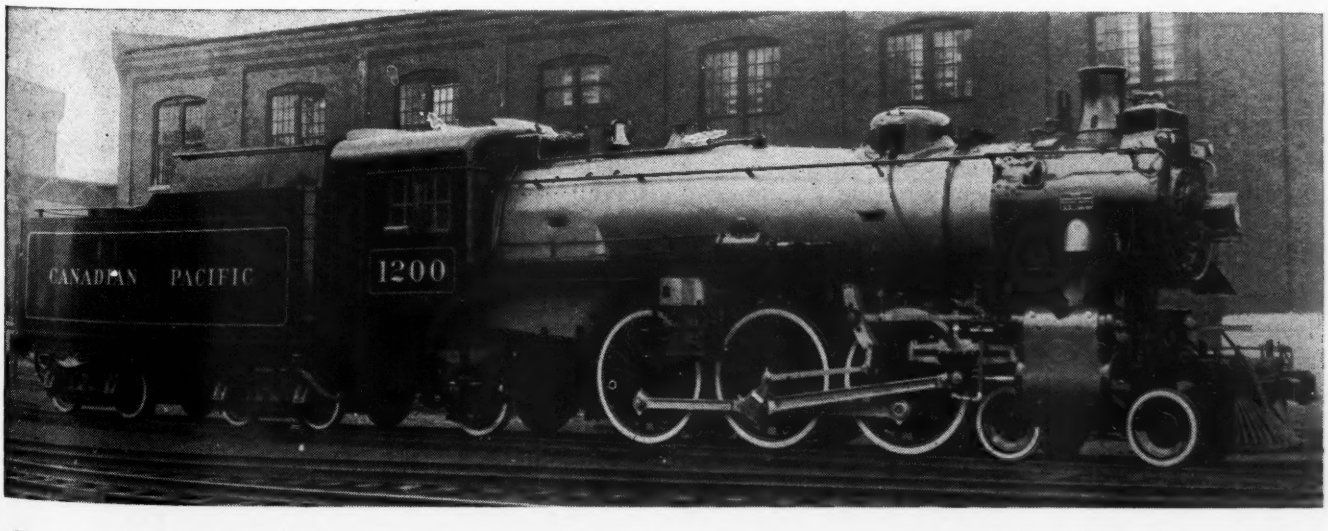
THE first locomotive to be built in the Angus shops of the Canadian Pacific since 1931 was released early in May. A sister locomotive is to be completed in June. Both are light Pacific-type passenger locomotives, one of which will operate in eastern Canada while the other is in service in western Canada. The two locomotives will be studied in service and, with any changes resulting from such study, are to serve as prototypes for passenger power which the railroad expects to build after the war to replace power now in service, some of it almost 40 years old. Plans which have been announced contemplate the replacement of 600 locomotive units of all classes in the years following the war.

The new locomotives are from 8,000 to 10,000 lb. lighter than those which they are intended to replace and are designed to operate within the most restricted track and bridge limits on the system. Boiler pressure has been increased from 200 lb. to 250 lb. and the cast-steel cylinders are 20 in. by 28 in. The driving wheels are 70 in. in diameter and the locomotives develop a tractive force of 34,000 lb. The factor of adhesion is 4.4. The grate area is 45.6 sq. ft. and the combined heating surface 3,320 sq. ft., obtained from 175 sq. ft. in the firebox, 24 sq. ft. in the arch, 2,377 sq. ft. in flues and tubes, and 744 sq. ft. in the superheater units. There are 32 5½-in. flues, 21 2-in. tubes, and 111 2¼-in. tubes. The length between flue sheets is 19 ft. 4⅞ in.

Engine and Tender Weight

The engine weighs 231,000 lb. having 150,000 lb. on the drivers, 39,800 lb. on the engine truck and 41,200 lb. on the trailer truck. The tender has a light weight of 76,000 lb. and a weight of 185,000 lb. when fully loaded with 14½ tons of coal and 8,000 imp. gal. of water. The engine with tender is 76 ft. 4⅛ in. in length over the couplers and it has an engine wheel base of 33 ft. 8½ in. and a driving-wheel base of 13 ft.

Some of the weight saving on the locomotive was realized in reducing the cab overhang on the back of the boiler and by constructing the upper portion of the cab from sheet aluminum. The cab was not lined but the interior of the cab shell was sprayed with a quarter inch coating of Insulmat which is both insulating and rust-preventing in nature. This is a test installation which will not be made a standard until the locomotives have had at least one winter season in service to determine whether or not the use of this material will be satisfactory. Further weight saving was obtained by reducing the depth of the mud ring and using only a single row of rivets instead of the two rows common to older classes of locomotives. The engine-truck frames are of cast steel sections welded together to give in effect one-piece cast steel frames.



The Canadian Pacific Intends to Replace Many of Its Older Passenger Locomotives after the War—This One Recently Built at the Angus Shops Will Be Used as a Design Standard after Any Mechanical Changes Dictated by its Performance in Regular Service Have Been Made

Mexicans Mitigate Labor Scarcity

Roads far overbid for 40,000 entrants authorized — 28 carriers sign exacting agreements under which more than 31,000 are already at work in various departments

A LITTLE more than a year ago there was slight prospect that many Mexican citizens would be admitted into the country to alleviate the serious labor shortage of the railways. Since then, however, developments in this direction have been substantial. The War Manpower Commission and the Board of Immigration Appeals have authorized entrance of 40,000 of these men specifically for railway work. More than 31,000 of them are now in the country, with the prospect that nearly 40,000 will be at work this summer. All of these Mexicans are being brought into the country under individual agreements with the War Manpower Commission, acting for the United States Government, and are being allotted to those roads which likewise sign agreements with the Commission. Fundamentals of these agreements, the details of which form the main body of this article, are that the period of employment shall extend for at least 180 days, with the right on the part of the worker to renew, if his services continue to be needed; and that the worker shall be afforded the same conditions of employment as domestic workers doing similar work in the same territory—as to wages, hours, housing, board, sanitary facilities, hospitalization and other factors affecting his welfare.

In the importation of Mexicans, as such, for work on the railways, there is nothing particularly new—a number of roads, especially in the Southwest and along the Pacific Coast, having employed them for such work during the last World War, and many of them ever since. However, in numbers and in the agreements under which the present workers are being brought in and employed, the situation is new in many respects. Furthermore, the more widespread distribution of these workers over the country, on roads with no previous experience with them, and under climatic and other conditions far different from their native environment, have raised many new problems.

Mexicans Now on 28 Roads

Following negotiations between the State Department and the War Manpower Commission with the Mexican government, the first agreement covering the importation of Mexicans for work on the American railways provided for the entry of 6,000 unskilled workers for employment as track laborers on the railways of the Southwest and Pacific Coast states. Announcement of this agreement was made by the War Manpower Commission on May 1, 1943, and recruitment of the workers began in Mexico City about May 10. Subsequently, about the middle of June, 1943, the "ceiling" on Mexican entries for railroad work was raised to 20,000, and in March, 1944, after further urging on the part of the railways and further negotiations on the part of the State Departments of the two countries, it was raised still further to 40,000, where it now stands.

Taking advantage of the relief that is certain in the employment of these importees, road after road has availed itself of the opportunity to hire them, including a number in the East and North which have never employed Mexicans before. To date, the requests of the railroads for Mexican laborers have exceeded 86,000, and allocations have been made to different roads, on the basis of a temporary "ceiling" for each road, to the limit of the importation quota. The names of these roads, together with the number of Mexican workers released to each of them as of May 24, are shown in the accompanying table. This table also shows for each road the number of Mexicans that had actually arrived in this country as of that date. That the total figures, both as regards the number released and the number having left Mexico, exceed the 40,000 importation limit, is explained by the fact that these figures represent all allocations, releases and entries into the country since the beginning of the program, including those Mexicans who have completed their contracts and have returned to Mexico, or who have returned to Mexico for other reasons.

Contract Renewals Around 35 Per Cent

As of May 13, contracts terminated for one reason or another and not renewed totaled 15,512. However, as of the same date, 4,224 Mexicans had renewed their contracts, this representing about 35 per cent of those whose contracts had expired, and these, together with the additional importations during the month, tended to offset losses and to increase the total number of workers in the country. Importations during May (to the 24th) included five groups of 850 each, one group leaving Mexico on May 4 for employment on the Burlington and Santa Fe; another group left Mexico on May 9 for employment on the Pennsylvania and the Long Island; another group left Mexico on May 12 for employment on the Southern Pacific, the Western Pacific and the Pacific Fruit Express; still another group left Mexico on May 17 for employment on the Pennsylvania, the Erie and the Northern Pacific; and still another group left Mexico on May 20 for employment on the Burlington, the Western Pacific and the Rock Island. The points of entry for all of these Mexicans during May were either El Paso or Laredo, Tex.

All of the Mexicans being brought into the country are contracted for employment in track work, but a number of roads, with the approval of the War Manpower Commission, have assigned some of them to work in and about their storehouses and mechanical shops, and for handling freight. To date, the number employed in such work has been relatively small, and has fluctuated widely, amounting to a total of about 3,350 early this year, when 2,500 were employed in the mechanical department, about 500 in the stores department, and about 350 as freight handlers. Several roads which had employed Mexicans on the track last summer and fall transferred a number of them to shop and stores work during the winter months. This spring, with the opening of the

track work season, some of these men were returned to the track department, although a considerable number of them, as well as additional workers, are being employed in the mechanical and stores departments at present.

A few roads have held out to the Mexicans employment in the mechanical department, with its higher basic rate of pay, as an inducement to them to renew their employment agreements, and in at least a few cases employment in the mechanical department has been offered to the Mexicans as a reward for unusual ability or diligence in their work on the track.

Government-Railroad Agreement

All negotiations for the allocation and hiring of Mexicans, following the initial agreements worked out by the State Departments of the United States and Mexico, have been handled by the War Manpower Commission—which, however, beyond making allocations to the various railroads and executing agreements with the individual workers and the railroads, has delegated to the Railroad Retirement Board all details relating to the recruiting and "processing" of the workers in Mexico, supervision over their transportation to the United States and return, the handling of subsequent negotiations with the railways, and the keeping of necessary records.

The fundamental terms of the understanding reached between the two countries stipulate that only unskilled labor may be brought in; that in no case shall the workers displace American workers, or be employed for the purpose of reducing rates of pay or other standards previously established; and that the workers will be afforded transportation without cost to points of work in the United States and return to Mexico, and be afforded the same wages and working conditions as American workers. Far and beyond these basic terms, however, are many others necessarily entered into by the railways and the individual workers with the United States government.

Among the many items in the agreement that must be executed by the railways in order to employ Mexicans are the following, which are given in substance only:

Record of Entrance of Mexicans

By Railroads—May 24, 1944

Railroad	Number Released	Number That Have Entered U. S.
Atchison, Topeka & Santa Fe	9,793	9,592
Baltimore & Ohio	850	847
Boston & Maine	301	249
Chicago & North Western	500	297
Chicago, Burlington & Quincy	2,363	2,074
Chicago, Milwaukee, St. Paul & Pacific	1,494	1,346
Chicago River & Indiana	333	298
Chicago, Rock Island & Pacific	1,000	900
Delaware, Lackawanna & Western	250	249
Erie	700	550
Florida East Coast	150	150
Fort Worth and Denver City	388	300
Great Northern	225	224
Indiana Harbor Belt	130	0
Lehigh Valley	400	250
Long Island	240	240
New York Central	3,560	2,746
New York, Chicago & St. Louis	225	200
New York, New Haven and Hartford	666	574
Northern Pacific	1,186	1,030
Northwestern Pacific	432	399
Pacific Fruit Express	1,609	999
Panhandle & Santa Fe	675	674
Pennsylvania	4,121	3,634
San Diego & Arizona Eastern	260	200
Southern Pacific	17,802	16,077
Spokane, Portland & Seattle	710	673
Texas & Pacific	920	798
Western Pacific	1,996	1,949
Total	53,279	47,519

In general, the railway or its duly authorized agent accepts workers recruited by the Railroad Retirement Board in Mexico. For each of those workers accepted, a Selection card is prepared and executed by the railway, this card, among other things, designating the point or points where the worker is to be employed in the United States, and the minimum rate of pay to be paid, including the overtime rate.

The railway agrees to pay the cost of transportation of each worker (including adequate subsistence during travel), and for the transportation of the worker's personal effects (limited to 7 lb.), from the point of contract in Mexico to the destination point specified on the Selection card, and return to Mexico, unless relieved of the obligation to pay return transportation costs by other specific provisions forming a part of the agreement. Even if the worker, after signing his contract with the railroad, is not permitted to leave Mexico or to enter the United States, or for any other reason should be returned to his point of contract, the railway must still pay the cost of his return to the point of contract in Mexico.

The railway agrees to employ each worker beginning with

Mexicans at Work on the New York Central

the day following that on which he reports at his destination point for work, and thereafter, in accordance with the provision of the railway's agreement, and with the terms and conditions of employment set forth on the worker's Selection card. The railway agrees to employ the worker only in those states and portions of states stated specifically on his Selection card, provided, however, that it may employ him elsewhere in the United States for periods not to exceed 14 consecutive days in the event of extreme emergencies requiring such employment, and provided further, that the War Manpower Commission may, with or without the consent of the railway, extend or limit further the states or portions of states within which a worker may be employed under the agreement.

Contract Extends for 180 Days

The railway agrees to afford each worker an opportunity for employment for at least 180 calendar days after arrival at his point of destination, unless relieved of such obligation by other provisions of its agreement. In each pay period, the railway agrees to afford each worker an opportunity to work not less than a number of hours equal to the product of eight times 75 per cent of the number of working days (except Sundays and legal holidays) in such pay period. During the entire period of the contract, the railway agrees to afford each worker an opportunity to work not less than a number of hours equal to the product of eight times 90 per cent of the number of working days (except Sundays and legal holidays) in the contract period. If the worker is afforded an opportunity to work, but is unable or unwilling to do so, the railway is relieved with respect to the above guarantee to the extent of the worker's unwillingness or inability to work during the period concerned. For each hour that the railway fails to afford any worker an opportunity to work as specified in the foregoing, it must pay the worker at the regular hourly rate of pay. Special stipulations are provided as to the responsibility of the railway in the matter of pay if, during the contract period of any worker his employment is terminated by or at the request of the War Manpower Commission for reasons other than breach of the railway's obligations, or because of circumstances justifying such termination rising out of the end of the war.

The railway agrees to pay the workers in lawful money of the United States, either at the end of each regular pay period or in accordance with its established procedure. Furthermore, in the event that its arrangement does not provide for the paying of the worker at the end of the first 15 days' work, the railway agrees to make at that time, upon the request of the worker, a token or advance payment, in order that the worker may have funds with which to meet his immediate needs. This advance payment must consist of the product of eight times 75 per cent of the number of days worked, multiplied by the hourly rate, less all proper deductions.

Conditions Equal Those for U. S. Citizens

The railway agrees not to discriminate against the Mexican worker in any way, and to afford each an opportunity to be employed no less than the minimum number of working hours per week afforded domestic workers who are engaged in similar work at the same place of employment. It also agrees that the employment of Mexicans shall be at wage rates (including time and one-half for all hours worked over eight hours a day) and under working conditions not less favorable to them than those prevailing for domestic workers, and to accord each Mexican rights and privileges (including rights and privileges with respect to promotions and general wage increases and rights and privileges rising under applicable collective bargaining agreements) not less favorable to him than to those accorded domestic workers.

The railway agrees further to provide or make available for each Mexican worker housing, sanitary, medical and commissary facilities not less favorable to him than the facilities provided domestic employees engaged in similar work at the place of employment, and at the same rate charged domestic employees. It also agrees to make no deductions from the wages of the Mexicans for commissions, fees or any other purpose which will have the effect of reducing his wages below those agreed to, except as follows:

(1) Deductions may be made for board or for reimbursement for other commissary supplies incurred voluntarily by the worker.

(2) A current hospital fee, not pro-rated, in return for which the worker is to have the benefit of the usual services of the hospital department provided by the railway for such employees.

(3) Any or all sums or taxes which the railway is required by law to deduct with respect to other workers who are residents of the United States.

The railway is restrained from requiring any worker to purchase at any source not of his own choosing, articles or services for his consumption or use, and from requiring any worker to purchase articles or equipment not required customarily of other employees.

Notwithstanding the provisions concerning deductions aforementioned, the railway is directed to deduct from the wages of each worker, for deposit as directed by the War Manpower Commission, such sums as the W. M. C., pursuant to the worker's agreement with the United States, may direct be deducted in accordance with the worker's savings fund provision of an agreement entered into between the United States and Mexico. The current amount being deducted is 10 per cent.

The railway agrees still further to release promptly any worker upon the request of the War Manpower Commission, provided, however, that no such request is to be made during the first 90 days of the contract period for reasons other than breach of the railway's obligations under its agreement, except where circumstances arising out of the end of the war, or causes attributable to the worker, justify earlier termination of the worker's employment.

Other Terms of Railways' Agreement

If the railway fails in a material respect to meet its obligations to any worker, the War Manpower Commission may terminate such worker's employment. If after any such termination, the worker, with the approval of the War Manpower Commission, accepts other employment in the United States during the remainder of his contract period, the railway's obligation to the worker with respect to minimum hours to be worked are to be reduced with respect to the worker to the guaranteed number of hours in that portion of the contract period preceding the date of commencement of the worker's employment with his new employer.

If the railway fails to pay any worker any sum due him under his contract, the United States government reserves the right to pay the worker all or any part of the sum due him, and the cost of any transportation, including subsistence, and reserves the right to demand reimbursement by the railway of any sum paid, together with interest thereon at 6 per cent per annum from the date of such payment by the United States.

The railway, in accordance with regulations prescribed by the War Manpower Commission, is required to keep full and complete records of each worker's employment, wages and other facts pertinent to the performance of its obligations under its agreement, and all such records are open to inspection, examination an copying by the W. M. C., as may be required.

If any worker is for any reason separated from employment for the railway, or for any reason performs no services for the railway in any seven consecutive days, the railway agrees to give prompt written notification to the nearest Railroad Retirement Board office for transmittal to the War Manpower Commission. Furthermore, if any worker is separated from employment, the railway agrees to transport him to the place designated by the W. M. C., which is ordinarily the point of contract in Mexico.

The railway agrees to furnish the United States government a sufficient "departure bond" conditioned upon its performance of the obligations imposed upon it by the Immigration and Naturalization Service of the Department of Justice with respect to the return of each worker to the point of contract. The amount of this bond is $20 per worker, which is deemed sufficient to cover a maximum liability of $500 for each worker who fails to return to Mexico.

Final stipulations in the railway's agreement provide that any questions rising out of the agreement, including any question as to the railway's liability or rights or obligations thereunder, are to be determined by the War Manpower Commission in accordance with regulations prescribed by the chairman of that

commission, subject to such further review as may be provided in such regulations, and that such determination shall be final and conclusive upon the railway, the worker and the United States government. They also provide that nothing contained in the agreement shall be construed to interfere with the right of any worker under the Railway Labor Act, as amended.

Government—Worker's Agreement

Having entered into agreements with the individual railways containing the foregoing provisions, the United States government, represented by the War Manpower Commission, signs an agreement with each Mexican employed, after the prospective employee passes certain physical requirements set up by the Department of Health of Mexico and the United States Public Health Service, and furthermore, warrants that he knows of no reason which would prevent him or his family from leaving or returning to Mexico, or entering or leaving the United States, as contemplated in the agreement.

Having satisfied itself as to the physical requirements of the worker, the War Manpower Commission concedes that its agreement with the worker may not be terminated due to the physical condition of the worker or to any change in such condition that may occur during the period of employment. However, it reserves the right to terminate the agreement immediately upon finding that the worker is suffering from a heart, mental or venereal disease, or has a chronic condition not contracted during or as a result of his employment in the United States, or if he has a contagious disease discovered while traveling from the point of contract to his destination in the United States.

Among the many provisions of the government's agreement with the worker are a group which insure to him the conditions as to wages, hours, housing, board, medical care, deductions, etc., set forth in the agreements between the government and the railroads. In the worker's agreement, however, it is stated specifically that the wages to be paid him will not be less than 46 cents an hour, plus any general adjustment—which now brings this figure to 57 cents an hour—and that any overtime shall be paid for at the same rate paid to domestic workers for similar work. Other terms of the agreement protect the worker against discrimination, provide for the handling of complaints, and insure to him transportation to and from his point of employment in the United States.

On his part, among other things, the worker agrees to work for a period of 180 days, Sundays and legal holidays excepted, starting the day following his arrival at the point of destination in the United States, unless the contract is terminated by the W. M. C. because of circumstances justifying such termination arising out of the end of the present war. He also agrees to perform all work required of him with proper application, care and diligence during the term of his agreement under the direction and supervision of his employer.

Some Provisions Clarified

In clarification of a number of the provisions of the agreement between the government and the railways, and between the government and the individual Mexican workers, the War Manpower Commission has from time to time issued interpretations and instructions—in fact, far too many to permit detailed reference to them in these pages. However, some of them, of basic importance, and the cause of considerable uncertainty, if not difficulty, in some quarters in the past, are commented upon in the following:

In the first place, as has already been demonstrated on a number of roads, that with proper authorization from the W. M. C., there is nothing in the agreements with either the workers or the railroads that prevents the transfer of Mexicans from one type of railroad work to another, or their use in unskilled or semi-skilled work, such as laborers, helpers, assistant foremen and machine operators, in any department.

The worker has the right to request termination of his individual work agreement, and the War Manpower Commission can terminate the worker's agreement and need not wait for the railway's request for termination.

Some of the Mexicans have interpreted one of the provisions of their agreement to mean that they are free to return to Mexico whenever they desire. It is pointed out that this is in error, and that it should be explained to the Mexicans that the section referred to has to do alone with the individual's status with respect to the immigration requirements of the United States and Mexico.

The granting of the leave of absence to a worker, while not covered by the agreements with the railways or the workers, is allowed, and is encouraged under certain circumstances. This, however, is left entirely between the worker and the railway. If the worker fails to return at the expiration of the leave of absence, the railway is asked to request termination of his contract.

If a worker's contract has been terminated because he is missing, the railway is still liable for his transportation back to his point of contract in Mexico in case he is later located. Nor is the railway relieved of its obligations with respect to the departure bond when it requests termination of a contract because a Mexican National is missing, and this request is granted by the W. M. C.

Contrary to the interpretation by some of the Mexicans as to their wage agreement, especially concerning pay for Sundays, whether worked or not, the railways are not required to pay wages on the seventh day of the week when only six days' work is performed.

The Mexicans are exempt from the withholding tax, but, on the other hand, they are subject to ultimate income tax and victory tax liability if their earnings within the United States in any taxable year are in excess of exemptions and allowable deductions.

"Place of Employment" Defined

In the interest of getting the Mexicans to renew their agreements beyond the 180-day limit incorporated in these agreements, the railways desiring to continue their employment are required to execute with the War Manpower Commission a contract supplementing their original agreement to employ and transport Mexicans. This supplement obliges the government to use its best efforts to renew its individual work agreements with those workers presently employed by the railway, and obliges the railway to "continue to employ each worker presently employed who renews his individual work agreement." The supplemental contract does not provide for nor contemplate that the railway shall consent to the renewal of each individual work contract. On the contrary, it provides for blanket agreement on the part of the railway to continue to employ those Mexicans whose contracts are renewed. In other words, the employer is not permitted to choose from those Mexican workers employed originally for a six months' period, those whom he would prefer to continue to employ, and refuse continued employment to those whom he might not choose to employ.

One of the latest interpretations on details of the agreement between the government and the railways for the employment of Mexicans, effective April 8, 1944, has to do with the phrase "place of employment." In this interpretation, the "place of employment" is defined as the zone corresponding to the railroad district generally known in the United States as a roadmaster's district. In the case of those railroads which do not divide their

lines into roadmaster's districts, the "place of employment" is defined as the already established district under the authority of that supervisory officer having comparably administrative jurisdiction over comparable territory.

Finally, it has been pointed out by the War Manpower Commission that the Mexican government is insistent that Mexican workers are entitled to the highest wage paid domestic workers doing similar work in the place of employment, whether these domestic workers are employed directly by the railroads or not.

However, it is pointed out that the following circumstances will not be considered violations of the railroads' agreements.

(1) The existence of wage differentials arising from the so-called "step rate" increases paid as a bonus for continuity and seniority of employment, since these increases are equally applicable to Mexican nationals when they have established such seniority.

(2) The existence of wage differentials known as "tunnel rates" paid for peculiarly hazardous or arduous work. These differentials, it is understood, shall be equally applicable to Mexican workers who accept such work.

(3) The temporary emergency use of workers of other rates of pay following an unforeseeable and uncontrollable act of nature which disrupts or threatens to disrupt essential traffic, provided the workers brought in are not paid for this emergency work more than their usual rates of pay for their regular employment. This exemption shall be effective only until traffic is re-established but in no case for more than ten days.

(4) Differentials in wages within the same roadmaster's district resulting from wage rates established under the Railway Labor Act and frozen by the Wage Stabilization Act, and which are part of the major wage structure of the industry as laid down by the first-mentioned Act, provided that official copies of the maps of these districts are immediately placed on record with the Mexican Government. It is understood that any benefits under these Acts shall also be enjoyed by Mexican workers.

(5) Incidental operations within the place of employment not connected with the railroad operation or maintenance by persons who are neither directly nor indirectly in the employ of the railroads.

Passenger Car Design Trends*

Additional passenger cars badly needed — New equipment will be designed to meet postwar requirements

By Allen Clarke

Assistant General Mechanical Engineer, American Car and Foundry Company, St. Charles, Mo.

TO THOSE concerned with the operation and maintenance of passenger cars and to the rest of us who travel on business more or less frequently, there is no need to mention the present urgent need for more passenger-carrying cars. This need has nearly reached the point where additional equipment may be considered a war emergency necessity; in fact, it is difficult to understand how the railroads have been able to handle the present passenger travel. For the year 1943 the record shows 85 billion passenger miles, which is just about double the 1918 travel, and this record was made with approximately 14,000 less passenger train cars than were available in 1918. Such a performance deserves much more public recognition than it has received.

Late last year there were indications that government agencies would authorize the building of some new passenger cars during 1944, particularly in view of anticipated increased travel during this year, estimated at 10 to 20 per cent over last year. The A. A. R. went so far as to determine the number of new cars which could be produced by the various builders, but so far no such program has been released, probably because of the more urgent need of materials and manpower for other war requirements. If any new cars are built during the present emergency the designs would likely be restricted so as to call for the use of a minimum of critical materials and the elimination of most luxury features. Because of the time required for assembly of materials and for construction, cars ordered now could hardly be delivered this year. So prospects for immediate relief are not bright and we can expect even more difficulty than at present in securing accommodations.

We, of course, recognize that the present volume of passenger travel is abnormal, but there are abundant indications that a large number of new passenger cars will be needed after the present war needs have ceased to exist. The present ownership of passenger-train cars by Class I railroads is about 38,000. Of this number about 19,000 or 50 per cent are more than 25 years old, and only about 4 per cent are under 10 years old. Under present hard usage and with maintenance and repair work delayed as it must now be, the useful life of the equipment is being shortened.

Influence of Postwar Competition

Another factor which must be considered is postwar competition: That period will see the return of the private automobile to the highways in increasing numbers, and the expansion of bus travel. Glowing word pictures have been painted of the great advancements expected in air travel, some having gone so far as to say that airplanes will entirely replace railroads in the not so far distant future. It is, however, more generally accepted that each of these forms of transportation has its own field and that there will be ample business for each, in the type of travel where it has the economic advantage, all factors being considered. Certain it is that if the railroads are to meet this competition successfully they must continue to provide the safest form of travel and be able to offer satisfactory speeds with more space, greater comfort and lower cost than its competitors. An estimated

* Abstract of a paper presented at the May 16 meeting of the Car Department Association of St. Louis.

15,000 new cars to meet these conditions seem to be indicated and this would require the capacity operation of present plants for at least five years.

There are two methods by which the railroads can add to their present passenger car ownership and plan for the retirement of heavy obsolete equipment: One plan would be based on the purchase of cars to make up a complete train or trains for specific runs. The other plan would contemplate the purchase of a number of cars of one type at the same time, taking advantage of the lower prices made possible by larger quantity production. These could be used in trains with the older equipment until a sufficient variety and number of cars of the various types had been secured to make up complete trains of the new light modern cars for the preferred runs and, eventually, for all trains. This is a question of policy to be decided by the railroad operating and passenger traffic departments, giving consideration to cost, the reaction of the passengers, advertising values, and other aspects of the problems peculiar to the railroad in question. The answer to this question will affect the decision as to the exterior finish, whether closures and skirts will be applied and other kindred matters.

The framing or structural materials for postwar cars will consist principally of alloys of the two plentiful metals, iron and aluminum. At an A. A. R. conference last December representatives of the large steel and aluminum companies stated that no new alloys would be available during 1944 other than those with which we are familiar from their use in the construction of streamlined trains which began in 1934. By the close of 1941 when the construction of passenger cars was stopped, there had been built 119 streamlined trains for 29 different railroads. For these, three basic structural metals were used: Low-alloy high-tensile steels as produced by several steel companies under various trade names, strong aluminum alloys and stainless steel. All three have been proved satisfactory in service and all will be used in the postwar cars. No doubt some new alloys will later become available and will be used when an advantage in increased strength or in cost of weight saving has been established. The large wartime increase in the production of magnesium as a structural material for airplanes has directed considerable attention to this plentiful metal, which weighs about one-third less than aluminum. It is also readily formed by extrusion, die or sand casting, forging, rolling and machining. To offset these advantages the present available alloys of magnesium are subject to rather rapid corrosion. We, therefore, do not anticipate any extensive use of magnesium alloys in car framing members but feel that it will find its application as parts for interior equipment and fittings where it can be suitably protected.

[At this point, Mr. Clarke explained how the choice between three major structural materials which are now, or soon will be, available for passenger car construction must be made, based on careful consideration of the following: strength, weight, cost, and appearance.—Editor.]

Lightweight Six-wheel Truck Proposed

Considerable attention is now being given to the possibilities of an alloy-steel lightweight design of six-wheel truck, which inherently would provide additional safety and equal or better riding qualities. With careful attention to design details, such a truck may be developed with little, if any, sacrifice in weight. Roller bearings and the use of sound-deadening materials for isolating truck noises from the car bodies are already well established practices which will certainly be continued.

Complaints are frequently heard about the roughness of starts and stops. Some of this may be chargeable to inadequate power, or to improper handling of throttle or brake. Roller bearings are helpful for easy starting and further improvement is possible in the design and application of draft gears, face plates and appurtenances. All of these should be isolated from the car body and cushioned by sound-deadening material.

With high speeds the H. S. C. brake equipment with speed governor control becomes a necessity as it provides for braking power at 250 per cent of lightweight at top speeds graduated down to 40 per cent at the low speeds just before the stop. With these conditions the use of the recently developed wheel-slide-control devices will be desirable in preventing slid-flat wheels.

Wheel-shoe clasp brakes continue to be generally accepted but may give way to some form of disc brake when this arrangement has been sufficiently refined and proved in service.

The design phases discussed so far, except the exterior appearance, are not those which are apparent to the average passenger. The things which appeal to him and attract his patronage have to do mainly with the interior arrangement and appointments.

Comfort and Convenience Features

It is in the features which contribute to the comfort and convenience of the passenger that we can expect the most marked advancement in the postwar cars: and this is said with full consideration given to the great strides already taken in this direction in the last ten years. To do this will require close attention to all details, each relatively minute in itself, but all added together to produce the ultimate desired.

One thing in which the railroad will excel over other forms of transportation is in the comfort which comes from adequate space, giving the passenger freedom to move about if desired, avoiding all feeling of being cramped. Vestibules and entrance passageways of ample width and free from projections are very important.

End doors need to have an improved lock and opening arrangement. We are sure the passenger will welcome an automatic door-opening and closing device with finger tip control, which may be either pneumatico or electric.

Ample spacing of coach seats must not be overlooked even at some sacrifice in seating capacity. Shape of ceiling and color effects may also be used to contribute to the sense of roominess.

In this connection the washrooms and toilets should be made as commodious as possible considering the length of the run and the type of the service. Two toilets for men and two for women is an arrangement that is already finding favor with several railroads. This seems to be especially desirable in coaches for overnight runs between large cities when the majority of the passengers ride through to the terminal. The washrooms for this type of car must be sufficiently large to accommodate several passengers at one time, with washstands, dental bowl, mirrors conveniently placed, and vanity dresser in the ladies' room. All must be arranged with ease of cleaning in mind and exposed pipes avoided so far as possible. It is expected that smoking will be permitted in the main body of the car by the majority of railroads, this practice having become more and more prevalent since the advent of air conditioning. Hence seats for one or two only need be included in the washroom arrangement as it will no longer need to double as a smoking room.

Watercoolers with electro-mechanical refrigeration

which are now in limited use have been giving satisfactory service and will be generally used in the future.

Greatly improved means to take care of hand luggage must be provided. The lack of adequate arrangements for this is one of the chief inconveniences of coach travel and is sometimes troublesome even when each car has its own porter. The overhead luggage racks are all right for small bags and parcels but most travelers today have one or more bags each which are entirely too large for these racks. Large lockers with shelves at the end of the car have been used with some success but many people are unwilling to leave their bags unwatched, especially on cars which do not carry a porter. The possibility of using checking lockers similar to those installed in stations has been suggested and this may prove to be one solution of the problem. Certainly this feature, which is such a serious problem under present crowded travel conditions, will be solved in one or more ways in the not too far distant future.

If it were not for the fact that in most cases it is not economically practical to turn cars at terminals, seats would not need to be reversible, which would permit storing luggage under the seat. Although this might be done on certain runs, the necessity of having a car of more universal application dictates that seats must be reversible; and the seat occupied by the passenger during most of the time he is on the car, will properly receive a large share of the passenger car designer's attention. It is hoped that the present A. A. R. committee investigation will provide the best dimensions for maximum comfort for the greatest number of people. With deep spring or rubber cushioning, adjustable backs, head rests, arm rests and foot rests, the new designs should leave little to be desired whether the passenger wishes to sleep, read or talk with his neighbor. Double-width windows, each for two seats, give better vision and further add to the feeling of roominess and to the beauty of the car, both inside and outside.

Avoid "Exciting" Décor in Coaches

We have all seen numerous examples of the decorator's art in the equipment built a few years before the war and in the rehabilitation of the older equipment. In many cases no expense was considered too great if it accomplished the striking effects desired. This highly decorative type of styling will probably continue in the lounge cars, cocktail bars, diners and other cars of these types but we believe that for coaches the style will be more restrained, at least so far as cost is concerned. The coach interior should be highly pleasing and of a restful rather than an exciting character. In this field the decorator will have many new materials available, including plastics of a number of varieties, metal finishes, such as aluminum, anodized in colors, and many others.

Fluorescent Lighting Here to Stay

Enough experience has been gained in the use of fluorescent lighting installed before the war to establish its desirability for railroad use. It has so many desirable characteristics that it began to be used even before suitable fixtures had been developed. Fixtures have been and are now being developed by the manufacturers to take full advantage of the fluorescent lighting qualities and at the same time to blend in with the decorative scheme. Proper illuminating values in the various parts of the car may be obtained without glare and variations in color for minimum eye strain and decorative effects are possible.

The use of fluorescent lighting brings up an electrical problem as 110-volt a. c. current seems to be most satisfactory. This may be provided by a 32-volt d. c.-110-volt a. c. motor-alternator now developed in several capacities. A tendency to turn to higher voltages for generators and batteries has been noted on some railroads for some time but it seems doubtful whether such a change to 64 volts or higher will have universal acceptance. Some attention is being given to the development of a Diesel engine and direct-connected generator which would supply current without drawing any power from the motive-power unit. Such a device would have to be of extremely rugged construction so as to call for a minimum of service attention. It would, however, provide a constant source of current supply without depending on storage batteries, and the current generated could be either a. c. or d. c. and of any voltage desired. Also, the present generally accepted 20-kw. capacity for cars having electro-mechanical air conditioning may need to be increased in the future as additional electrical features are developed.

Further Refinements in Air Conditioning

Air conditioning has already become a necessity rather than a luxury. At present the term is generally associated with summer cooling only. It is believed that future improvements will be in the nature of refinements, especially in the controls and the combining of heating and cooling in one system. Future controls will be entirely automatic, modulated according to outside temperature and providing heating, cooling and humidity control to maintain conditions within the comfort zone at all times. Other improvements will include effective means for control of odors and health devices, such as the germ-killing ultra violet lamp for reducing the possibility of contagion.

With attractive new equipment, operated on convenient schedules and at increased speeds; with the low cost possible with mass transportation, there seems to be no reason to doubt that the railroads will be favored with the large share of passenger travel to which they are entitled on an economic basis.

* * *

These Vehicles, Apparently Continental Type Box Cars, Are Actually Whitcomb Diesel-Electric Locomotives Camouflaged to Deceive Axis Bombing Planes

How to Attain Transport Economy

Paying traffic subsidies to entice it away from railroads results in spreading load thinly; and increases costs to the nation's impoverishment

By Ralph Budd

THROUGHOUT the years following the First World War the railroads made tremendous improvements in their physical properties and methods of operation at a cost of $10 billion. That the resulting increased capacity of the railroads went unnoticed even by those who call themselves transportation experts and do a lot of public writing and talking on the subject, is shown by the many and widespread predictions made in 1940 and 1941 that the railroads were unprepared to handle the traffic incident to war. An important feature of this railroad modernization has been the improvement in steam locomotives through the use of lightweight reciprocating parts, counter balances, roller bearings, better lubrication, and high pressure boilers.

The dawn-to-dusk non-stop run from Denver to Chicago 10 years ago served to highlight one of the things which entered into the 20-year railroad modernization program. In itself the little 3-car Pioneer Zephyr with its 600-hp. Diesel engine was a comparatively small item, but the progress which it symbolized and the rapid changes which followed that demonstration had a decided effect upon the railroads' ability to handle the wartime traffic of the past three years. The Burlington management was glad to provide the testing facilities—the proving ground so to speak—and to be the agency which conducted this test of what ten years ago was the only Diesel powered train in America.

Railroad Development Still Has Far to Go

There is a tendency to underestimate the value and future possibilities of things we have had and used for many years and to discount them in favor of some new and often untried project or idea. This, no doubt, arises partly from the rapid industrial progress we have witnessed and partly from the hope of a magical, mysterious process by which Utopia may be attained and the natural laws and their consequences be escaped. So it is we are prone to overlook the possibilities of further improvement in railroads and the extensive employment of men and material which would result. I venture that any practical railway operating man could point out dozens of things he would like to do to improve his property. He knows quite definitely the benefits that would flow from such improvements in the way of increased efficiency or greater safety.

While the introduction of light weight cars and locomotives was dramatized by the Zephyr ten years ago, the percentage of old and heavy cars and locomotives which have been retired in favor of new units is very small. This is due, of course, in part to the inability to obtain critical materials since 1941, and in part to the oversupply of transportation and low railway earnings prior to 1940. The point is that while we observe the tenth anniversary of the actual performance of Diesel power and lightweight cars, these types are not yet generally in service and the impact of railroad modernization on the heavy goods industries will be felt in the future when all the desirable materials and skilled artisans will be again available.

The replacement of freight cars is a much larger item than that of passenger cars because there are 2,000,000 freight cars and only about 46,000 passenger train cars, including railroad and privately-owned cars in both cases. Cars and locomotives are only two items in the railway plant. The fixed properties—tracks, signals, shops, roundhouses and stations—also afford opportunities for modernization which can be made the basis of great postwar industrial activity.

Great Improvements—if Public Policy Permits

Perhaps it seems at this point that I am promising and predicting great things. That is not necessarily true. What I am doing is pointing out the tremendous possibilities. Whether or not they are realized, and the extent to which they are realized, depend and must depend upon what public policies prevail—that is whether legislation and regulation of carriers will permit these desirable things to be done. The public policy, as expressed in the laws and their administration, will determine the question. Favorable to a constructive program would be a tax reform which would permit deduction from taxable income of maintenance funds set aside and earmarked for future use; freight rates that would recognize the value of the property devoted to public use without regard to market value of securities which in many cases have been shrunk in reorganization; above all, fair and equal treatment of all public carriers through avoidance or elimination of subsidies which would have the effect of artificially overexpanding the country's transportation plant—thereby necessitating its operation with inadequate traffic and placing a needless burden on the unsubsidized carriers and the public.

The showing made by the American railroads since 1939 has demonstrated the fundamental importance of volume of traffic. The present large volume is being handled at pre-war freight rates, but the carriers are able to pay greatly increased wages to their employees and higher prices for their materials and supplies. Railroad taxes, moreover, have become fantastic. In 1943 the C. B. & Q. tax accruals were equal to $32.53 a share on its capital stock, while $3 a share was paid in dividends. Burlington's experience was typical of the roads generally.

Now, if increase in traffic volume is so profound in its

NOTE—This article by the Burlington's president is based upon an address to the Executives' Club of Chicago and the Chicago Association of Commerce on May 26.

effects, a decrease is equally so, and a public policy which will decrease the volume of railroad traffic by subsidizing competitors needs to have very careful scrutiny. Someone must pay for the waste. Of course, it will be your money and mine and all of ours, whether it is in the form of taxes or higher rates or confiscation of private property through unfair competition. There is a practical way to protect the public, both taxpayer and shipper, and that is to require every user of publicly-provided facilities to pay a fair charge for such use; also to require all transportation projects which involve the expenditure of public money to be submitted to the Interstate Commerce Commission just as new railway extensions must be submitted to determine the necessity for such expenditures, including the effect they will have on existing essential carriers.

There are truly great possibilities for improvement in railway plant and performance. Some of them may be spectacular. Probably most of them will be of an evolutionary character rather than revolutionary. They should not be restricted by limiting carriers arbitrarily to narrow fields—keeping the several types of carriers in separate compartments. Carriers should be encouraged to become general transportation agencies, offering to the public whatever the public may desire in a free and open field. In short, there should be complete freedom and equality of opportunity.

With that guarantee, I promise and predict gratifying developments in transportation and large employment of men and materials.

C. & N. W. Reorganized

ON June 1, the Chicago & North Western became the third major railroad to emerge from receivership. Properties of the Chicago & North Western Railway Company, incorporated in Wisconsin, Illinois and Michigan, have been transferred to a new company of the same name, incorporated in Wisconsin. The signing of orders by the Federal District Court at Chicago, directing the transfer, marked the end of this road's receivership, which began on October 21, 1935. Dates for the exchange of the old bonds and claims into new securities and voting trust certificates will be announced later.

Election of New Officers

The first order of business on June 1 was the selection of a board of directors by the voting trustees. The board in turn elected the officers of the new company from the personnel of the old company. Rowland L. Williams, who has been chief executive officer since July 25, 1939, was elected president of the new company. Other executive officers elected are: William T. Faricy, vice-president and general counsel, who was general counsel; Barret Conway, vice-president and secretary, who occupied the same position with the old company; Lynne L. White, vice-president in charge of operation, who was chief operating officer during the receivership; Frank G. Fitz-Patrick, vice-president in charge of traffic, who was chief traffic officer; Frederick O. Linstead, treasurer, who held this position before the receivership; William F. White and H. H. Small, assistant secretaries, who were assistant secretaries and assistant treasurers; and Harry S. Aldridge, assistant treasurer. Officers elected with headquarters in New York City are: Carleton H. Vail, assistant secretary and assistant treasurer, and Lawrence W. Furnald, assistant secretary and assistant treasurer, who held the same positions previously. In addition, Harry W. Rush and William C. Bohlke have been appointed by the board as temporary vice-presidents with headquarters in New York.

Board Membership of 15

The board of directors which elected these officers consists of 15 members, including the following: To serve for terms expiring in 1945—William E. Buchanan, president of the Appleton Wire Works, Appleton, Wis.; John H. MacMillan, president of Cargill, Inc., Minneapolis, Minn.; Howard J. Klossner, a director of the Reconstruction Finance Corporation, Washington; Harry L. Wells, vice-president and business manager of Northwestern University, Evanston, Ill.; and Walter P. Paepcke, president of the Container Corporation of America, Chicago. For terms expiring in 1946—Frederick W. Walker, vice-president of the Northwestern Mutual Life Insurance Company, Milwaukee, Wis.; Fred N. Oliver, general counsel of the National Association of Mutual Savings Banks, New York; Harold W. Sweatt, president of the Minneapolis-Honeywell Regulator Company, Minneapolis; William C. Frye, manufacturer, Milwaukee; and Meyer Kestnbaum, president of Hart, Schaffner & Marx, Chicago. For terms expiring in 1947—Eugene A. Schmidt, Jr., assistant treasurer of the Metropolitan Life Insurance Company, New York City; Leonard E. Hurtz, president of the Fairmont Creamery Company, Omaha, Neb.; Rowland L. Williams, president, and William T. Faricy, vice-president and general counsel of the North Western, Chicago; and John Nuveen, Jr., of John Nuveen & Company, investment bankers, Chicago.

The voting trustees who elected the new board are Frederick W. Walker, vice-president of the Northwestern Mutual Life Insurance Company, Milwaukee; Henry Bruere, president of the Bowery Savings Bank, New York; Harry L. Wells; Howard J. Klossner; and Robert M. Hutchins, president of the University of Chicago.

Members of the finance committee appointed by the board are Frederick W. Walker, chairman, Eugene A. Schmidt, Jr., Howard J. Klossner, Fred N. Oliver and Rowland L. Williams.

The North Western was incorporated on June 7, 1859, as successor to the Chicago, St. Paul & Fond du Lac, which operated 177 mi. between Chicago and Fond du Lac, Wis. Extensions made from time to time, the construction of additional lines and various consolidations with other companies added to the length of the system until at the present time the company owns 8,867 mi. of main lines in Illinois, Wisconsin, Michigan, Minnesota, Iowa, North Dakota, South Dakota, Nebraska and Wyoming and operates an additional 245 mi. under contract and trackage rights. The lines radiate from Chicago, between Lake Michigan and Lake Superior and the Twin Cities, Rapid City, S. D., Lander, Wyo., and Council Bluffs, Iowa, at which latter point connection with the Union Pacific, forms the Overland transcontinental route to the Pacific Coast.

The North Western was long a profitable road. Since 1864 and until 1935, dividends ranging from 2½ to 12 per cent were paid on preferred and common stock in all but about four years while in only one year, 1921, of that period, did the railroad fail to earn the interest on its funded debt.

The Chicago & North Western was placed in receivership in 1935 because the long continued depression, four years of unprecedented drought in agricultural regions,

highway competition with branch lines and taxes reduced its earning power so that it could not meet its fixed charges in the years 1931-35 (although in 1941-43 it earned more than its fixed charges). As a result of these conditions its operating revenues dropped from $154,732,947 in 1929 to $72,491,521 in 1932 and returned to only $77,345,496 in 1935.

Products of agriculture and animals normally account for about 20 per cent of revenues. In good years, products of mines account for between 20 and 25 per cent of revenues, while products of forests account for about 7 per cent and manufacturers and miscellaneous traffic produce about 40 per cent of freight revenues. It ordinarily originates about 58 per cent of its tonnage while about 42 per cent is received from connections. Passenger revenues account for about 12 per cent of gross revenues.

New Fixed Charges $4 Million Annually

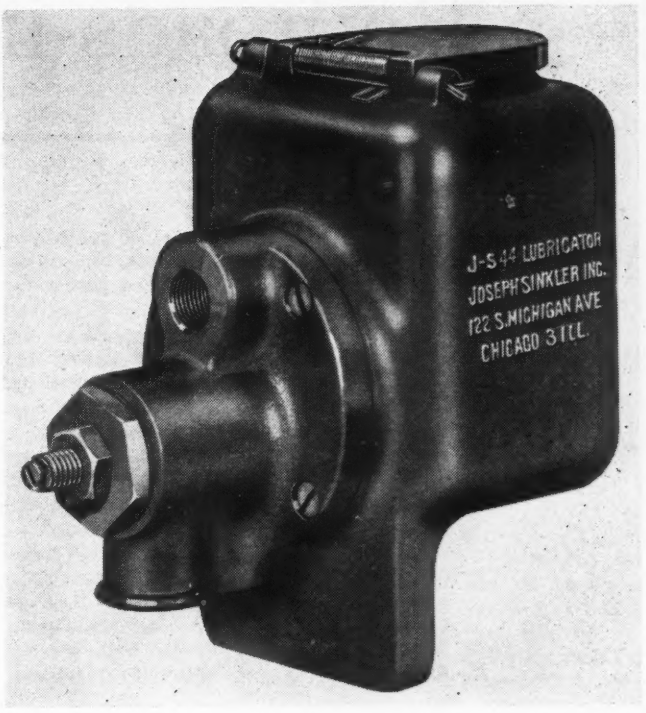
In planning the reorganization of the North Western, the Interstate Commerce Commission took cognizance of the long downward trend of traffic and reduced fixed charges to a point where, on the basis of past experience, they can easily be met with anticipated earnings. The fixed charges of the new company are $4,000,000, compared with average earnings of $7,800,000, a coverage of 1.9 times before federal income taxes. The reduction of fixed charges from $16,549,740 was accomplished with a reduction in the total capitalization from $550,000,000 to $450,000,000. As a result, the financial structure of the new company consists of a fixed interest debt of $117,000,000 and a contingent interest debt of $105,000,000, compared with a previous fixed interest debt of $370,000,000; preferred stock of $107,000,000, compared with $22,000,000; and common stock of $121,000,000, compared with $158,000,000. The first and general mortgage bonds, series A, carry a 4 per cent interest rate, of which 2½ per cent is fixed and 1½ per cent is contingent. The total charges ahead of the preferred stock are $12,776,369 and those ahead of the common stock, after $5,349,804 for preferred dividends, are $18,126,173.

"Death Sentence" on Old Stock

The contingent interest is commutable into fixed interest when it has been earned and has been payable for three successive years. An additions and betterments fund of $3,000,000 annually is provided for the first three years and of $2,500,000, or 2.5 per cent of operating revenues, whichever is smaller, for succeeding years. In the reorganization, preferred and common stock of the old company did not participate. Bonds, debentures and unsecured claims were treated as shown in the accompanying table.

How Old Company Bonds Are Replaced

Outstanding issue	New bonds	New income bonds	New preferred stock	New no-par common stock, shares
General mortgage 3½% bonds	$198	$463	$427	0.40
General mortgage 4% bonds	202	470	434	0.41
General mortgage 4½% bonds	205	478	440	0.42
General mortgage 4¾% bonds	207	481	444	0.42
General mortgage 5% bonds	208	485	447	0.43
Secured 6½'s	250	582	537	0.51
Milwaukee & State Line bonds	311	445	384	...
Manitowoc bonds	375	399	366	...
St. Paul Eastern bonds	...	...	...	11.80
Sparta bonds	240	271	330	3.12
St. Louis-Peoria bonds	428	388	384	...
First and refunding mortgage 4½% bonds	152	230	302	4.77
First and refunding mortgage 5% bonds	154	233	307	4.85
First and refunding mortgage 6% bonds	159	241	316	4.99
Debentures and unsecured claims	...	...	...	6.34



A Power Reverse Gear Lubricator Designed to Minimize Gear Creep and Wear

Lubricator for Power Reverse Gear

JOSEPH SINKLER, Inc., Chicago, in collaboration with the Goetz-Voss Corporation, Milwaukee, Wis., the inventors, has developed a new mechanical lubricator especially designed to supply adequate lubrication for power reverse gears on road locomotives assigned to long high-speed runs and for switching power. This J-S No. 44 lubricator is designed to take the place of an ordinary oil cup which holds only a few teaspoonfuls of oil and feeds out quickly. The new lubricator holds one pint of oil and, on extended locomotive runs, will ordinarily lubricate a power reverse gear from 1,000 to 1,500 miles. The lubricator operates only when the reverse gear works, and the attendant supply of an adequate amount of oil just when and where it is needed tends to minimize reverse-gear creep and reduce maintenance costs.

The lubricator consists of a small and compact air-operated pump unit which extends into an oil reservoir casting and is secured firmly to it by four small screws through the flange, only two of these screws being shown in the illustration. The lower outlet from the pump unit has a ⅜-in. pipe connection to the exhaust line and the ⅜-in. upper outlet is piped to the air inlet of the reverse gear operating valve. Each time this valve exhausts, the pump plunger and oil piston move inward, forcing a small amount of oil past a ball check valve and into the flow of air to the reverse gear.

As soon as the exhaust pressure ceases, a spring returns the plunger and oil piston to its original position, drawing an equivalent amount of oil from the reservoir past another ball check valve into the small oil cylinder ready for the next stroke. The length of the piston stroke, which controls the amount of oil delivered, is adjustable by means of the small screw and locknut shown at the left end of the oil pump unit. This unit is easily removable for inspection or repairs.

Railroads-in-War News

Asks Honest Figures On Waterway Costs

Wyo. senator wants figures to include taxes, not just what shipper pays

Making a minority report on H. R. 3961, the $500,000,000 rivers and harbors bill which was reported recently from the Senate committee on commerce, Senator Robertson, Republican of Wyoming, complained that so-called "benefits" of waterway projects are calculated without any consideration of the "hundreds of millions of dollars expended by the federal government to construct these waterways," or the "millions of dollars of annual maintenance cost paid by the federal government." As Mr. Robertson pointed out, the "benefits" are arrived at by comparing railroad rates with the estimated rates on water-borne traffic, which latter take into consideration only "the cost, maintenance, and operation of a towboat and a string of barges."

What Is Cost?—In arguing against the "inequality" of the present calculation methods, the Senator called attention to the fact that:

"Railroad rates are based on the cost of construction and maintenance of railroad bed and trackage and the operation thereon of power units and freight cars hauling freight on this railroad trackage, and the paying of vast sums in taxes and the supporting of hundreds of thousands of men and women receiving a good living wage and operating under regulated conditions. These factors go to the making of the rate of the railroads which, with their dependability and speed of movement of freight, have not only been invaluable but an absolute necessity to our great war effort."

Senator Robertson is not opposed to inland waterway transportation, but he does "insist on a fair and equitable comparison of rates, based on cost of construction and maintenance, in addition to operation of the transportation system in question." Taking the Beaver-Mahoning project as an example, he stated that its final cost will be $70,000,000 for construction and an estimated $630,000 for yearly maintenance. Meanwhile, Mr. Robertson is "reliably informed" that a new double-track railroad from a loading point on the Ohio river up the 25 miles to Youngstown "would be between 15 and 20 million dollars."

Cheaper to Build a Railroad—"It must," he went on, "be evident to all that if the government built this railroad for this sum and maintained it at an annual cost of not exceeding $130,000, that some $50,000,000 would be saved in construction costs as compared with the waterway, and some $500,000 annually in maintenance costs, and if the railroads were permitted to operate their equipment over this federally-built and maintained railroad without any charge as in the case of the waterway, the per-ton freight rate would be considerably less than that estimated for the water-borne transportation system with positive, dependable operation all the year round."

Senator Robertson made it clear that he was not advocating the construction of such a railroad; he was merely using the case as an illustration. The remainder of his report was a call for an amendment to the bill which would provide for the participation of interested states and the Department of the Interior in Army investigations of waterway projects west of the ninety-seventh meridian. Also, he would require the Army engineers to submit to Congress "a complete and comprehensive plan of the entire waterways of the United States," before the bill's list or any future "subsidized inland waterways" are authorized.

Government Modifies Manpower Regulations

Modification of the Selective Service replacement schedule program to apply it primarily to men from 26 through 29 years of age and to conform to current draft policies was announced last week. Due to the increased restrictions on deferment of men under 26 the systematic release of men from industry hereafter will apply to the 26-29 year age group, it was explained, and replacement schedules will have to be adjusted accordingly.

Subject to revision consistent with current Selective Service policies, present replacement schedules may continue in effect until their expiration date, according to the announcement, and renewals for one 6-month period may be allowed by the state Selective Service director. These schedules were designed originally to provide for the systematic release of men engaged in essential work who had to be made available for military service, and extended over the 18-37 year age group; as now modified they will operate in general in the 26-29 year age group.

Also announced last week was the War Manpower Commission's purpose to put into nationwide effect by July 1 the so-called "priority referral" plan for directing available male labor into essential industries. Its operation is to be tied in with the federal government employment service, and employers are required to hire men only when they have been referred to them by the employment service "or by approved arrangements." Manpower priorities committees in the labor-shortage areas will decide which industries in their respective areas are entitled to priorities in referral of available men. In such areas "ceilings" will be fixed on the number who may be employed by specified employers.

Army's Rolling Stock Needs Are Past Peak

Won't order so much equipment for itself—no let-up in demands on carriers

Because Army installations of railway equipment within the United States have been substantially completed, and because most of the requirements of such equipment for overseas use have been anticipated, War Department expenditures for such purposes in the fiscal year 1945 will take a downward trend, Maj. Gen. Charles P. Gross, chief of transportation, informed a House appropriations subcommittee at recent hearings on the Military Establishment Appropriation Bill for the next fiscal year.

Further overseas requirements are based, he explained, on the needs of rail lines now under Army control abroad, and the anticipated needs for the operation of railroads in conquered countries. "Consideration has been given to the expected demolition of a considerable portion of existing equipment," he said. The estimates submitted to the committee called for $90,000,000 for railroad equipment, based on requisitions from the military railway services to meet needs for movement forward in conquered territories. In addition, $118,000,000 for lend-lease railroad equipment was included in the Army's estimate of its fiscal 1945 requirements.

In contrast to the smaller expected expenditures for equipment procurement in the next fiscal year, Gen. Gross explained that costs of Transportation Corps operations and of distribution of supplies within the United States and abroad would continue at a high rate. Questioning by Representative Engel, Republican of Michigan, brought out the fact that the estimates submitted for the War Department's domestic freight charges were based on existing land-grant rates. If the land-grant rate law is repealed, Gen. Gross estimated that the Army's fiscal 1945 freight bill would be increased about $200,000,000.

In this connection, Mr. Engel inquired what progress had been made by the Transportation Corps in obtaining favorable classifications—from the Army's viewpoint—of many items of military freight that had been previously unclassified, and Gen. Gross responded by outlining the work that had been done by Col. W. J. Williamson, chief of the traffic control division, in classifying "by the hundreds of thousands" such items that peacetime schedules did not cover. By getting lower freight rates through classifying such articles, Col. Williamson, he said, "has been worth millions of dollars to the government."

De-Vinsonizer Now Taking the Price-Bill-Amendment Route

Senate and House bills to extend the Emergency Price Control Act of 1942 have been reported favorably from the respective committees on banking and currency with provisions to relieve Economic Stabilization Director Fred M. Vinson of the authority he now has to pass on railway wage adjustments. The bills are S.1764 and H. R. 4941.

Their provisions with respect to railway wages are like those embodied in Senate Joint Resolution 91, for the consideration of which the House committee on rules recently granted a rule, as noted in the *Railway Age* of May 27, page 1033. That rule has not yet come up for consideration by the House, and the joint resolution is now expected to be shelved and the price-bill amendment pushed instead. The proposed legislation would make findings of Railway Labor Act agencies, i.e., the National Mediation Board, or arbitration or emergency boards, "conclusive" in railway wage proceedings; although such agencies would be required to certify that their findings are consistent with the stabilization program.

Would Permit Explosives to Be Carried on Passenger Trains

Bills which would permit railroads to carry explosives on passenger trains have been introduced in Congress by Chairman Wheeler of the Senate committee on interstate commerce and Chairman Lea of the House committee on interstate and foreign commerce. The Wheeler bill, introduced "by request" is S. 1980, and the Lea bill is H. R. 4958.

They propose to amend the Transportation of Explosives Act by adding to section 232 the following: "In time of war this section shall not apply to any shipment or shipments consigned by or to the military or naval forces of the United States when the transportation thereof has been requested by the Secretary of War or the Secretary of the Navy and has been authorized by the Interstate Commerce Commission under such special regulations and conditions as the commission may prescribe; but, except as otherwise provided in this section, no explosives shall be carried in that part of a car or vehicle which is being used for the transportation of passengers for hire."

Burke Surveys the Postwar Travel Picture

Promising better transportation facilities after the war, a travel-minded America—"indeed, a wave of traveling both at home and abroad"—and plenty of jobs in the transportation industry for its returning service men, E. P. Burke, passenger traffic manager, the Pullman Company, on June 5, assured the Traffic Club of New York at the Biltmore hotel, that he holds no "pessimistic view" for the future, and expects no substantial loss of railroad business to the airlines.

Observing that there is reason to believe that economic conditions will be conducive to widespread travel, Mr. Burke pointed out that "psychological and social factors resulting from the war" will influence travel even more. "The nation and the globe seem to be shrinking as we watch," he asserted. With the world virtually a "backyard," and with servicemen in this country averaging six trips of 1500 miles each before ever leaving the States, he feels certain "wartime travel habits are not likely to be discarded quickly when peace comes." "Certainly the sun never sets on the American soldier," he continued, "and I believe that after the war it is unlikely that the sun will set on the American traveler."

Indicating that the "principal yardstick of the airline enthusiast seems to be the business of the Pullman Company," Mr. Burke stated that his organization, in making its plans for the future, "sees no possibility that the airlines will divert from Pullman any substantial part of its business during the coming decade." On the contrary, he anticipates Pullman business to increase from its prewar average, and looks for increased volume for all common carriers, "all of them sharing to the extent of their progressiveness in an expanded market."

In support of his view he pointed out that during the period 1922 to 1929, travel by Pullman held consistently to a level of about 13 or 14 billion passenger miles a year, hardly varying from that figure despite the rise in 1922 of two new factors in the travel market—the private automobile and the bus, which in seven years added more than 200 billion passenger miles to the annual intercity volume.

"This was five times as great alone as the entire 40-billion market in 1922, and if someone had predicted the volume of these new competitive factors then, we probably would have been very seriously concerned about losing the major share of our business," Mr. Burke remarked. "Instead, the travel market itself expanded, as I believe it will expand again.

"In 1942, Pullman sleeping cars carried about 25 per cent of all scheduled intercity passenger travel, delivering 19 billion of the 75 billion passenger-mile total, a figure which does not include the heavily restricted intercity automobile travel. Airlines accounted for 1.4 billion, or less than 2 per cent of the total. In 1943, Pullman carried 26 billion or about 22 per cent of the 115 billion passenger-mile total, while the airlines carried less than 1½ per cent.

"It is difficult to see how this relative figure can be altered much in the immediate years to come. I don't know exactly what the airlines mean when they say they will take '70 per cent' of Pullman's business, but it is quite evident that it will not be in this decade that commercial air travel will leap from a prewar level of about a billion passenger-miles annually to more than 20 billion. I have no doubt that some of the predictions are based on the wholly unwarranted assumption that railroad facilities will remain unchanged from those of the 1920's and 1930's."

New O. D. T. Employee Training Bulletin

The Office of Defense Transportation has announced a new training information bulletin, "Transportation Training," the second of a series. This publication describes in detail the federal war training agencies and the services they can render. In addition, it presents actual examples of training programs in operation, information on

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Photo Courtesy C. N. R.

Canadian National's Newest Hospital Car

Hon. J. L. Ralston, Minister of National Defense, who, with Col. G. C. Currie (right) Deputy Minister of National Defense (Army), recently inspected the C. N. R.'s fourth "hospital on wheels" when exhibited in Ottawa. Col. Ralston can be observed attaching the extension cord for the call-bell system for one of the 28 beds in the air-conditioned "ward."

recruitment and selection of workers, and preparation of instructional analyses for training purposes. Copies may be procured by writing to the Division of Transport Personnel, Office of Defense Transportation, Washington 25, D. C.

Johnson Seeks "Firm Measures" on Government Travel

The chairmen of the appropriations committees of the House and Senate and the Bureau of the Budget are being asked by Col. J. Monroe Johnson, director of the Office of Defense Transportation, to "take firm measures" to insure the immediate curtailment of government travel, "particularly in connection with conventions and other trade meetings," according to an O. D. T. announcement this week.

"With the invasion now actually under way, the demands on the transportation facilities of the country are increasing, not decreasing," he said. "Organized troop movement combined with increased casualty transportation is gaining record-breaking proportions. The hardship involved in the cancellation of business meetings involving travel cannot be compared with either the outright danger such non-essential travel imposes on the war effort nor with the very real physical hardships now being experienced by our military forces," he added, and on that premise he "demanded," as the O. D. T. statement put it, that all non-war connected conventions, trade meetings and conferences, as well as all non-essential civilian travel, be canceled immediately.

Materials and Prices

The following is a digest of orders and notices that have been issued by the War Production Board and the Office of Price Administration since May 23, and which are of interest to railways:

Metal Lath—Provisions governing the use of metal plastering bases and metal plastering accessories have been removed from Order L-59-b as amended. The permitted uses of these items for war housing are set forth in the War Housing Critical List (Schedule 1 of Order P-55-c) as issued in February 1944. For other construction requiring authorization under Order L-41, permitted uses are now listed in CMPR 6, Schedule A, Construction Limitations, issued May 23.

Order L-59-b formerly prohibited the manufacture of any metal lath and accessories for any use except for the military and for a few specified industrial purposes. As amended the order imposes specified weight limitations on the manufacture of: expanded lath, ribbed lath, wire stucco mesh, conerite or stripite from expanded lath; and small nose corner bead and base screed. The sale of metal lath and accessories is restricted to purchase orders bearing preference ratings of AA-5 or better, and to orders amounting to $5 or less. Orders may not be divided to come within this $5 limit.

Plumbing and Heating Materials — Certain listed copper-containing items of plumbing and heating equipment and building material have been freed from frozen inventories since no war use for these products in their present form can be found and their reclamation for remelting is impracticable. However, the use of copper and copper base alloys in the manufacture of such items remains prohibited.

Amendment of Supplementary Conservation Order M-9-c-4 now permits use of inventories of finished items listed in Paragraph (a) (5) of the order, previously frozen by its restriction. Another change allows use of copper and copper base alloy building material, pipe or tubing when necessary to replace similar items in or on a building, from stocks now in possession of the building owner. Previously, owners were permitted to use only material in their possession on June 23, 1943, in amounts not to exceed 25 pounds for each specific repair. It is believed that there are only small stocks of these materials in the hands of owners, but the use of such as there are will make for more satisfactory repair jobs and will reduce the man-hours required to effect them, WPB said.

Wire—The definition of "wire rods, wire and wire products" contained in Schedule 1 of CMPR-1 has been modified to exclude chain link fence fabric from the controlled materials forms and shapes of carbon steel.

Typewriters—Applications covering the purchase of all typewriters may now be filed and processed in WPB field offices, in accordance with amendments to Limitation Order L-54-a. Previously all such applications had to be processed in Washington.

Water Heater Jackets—The prohibition on the use of metal jackets for water heaters has been relaxed to permit the use of steel in manufacturers' inventories and such steel as may be obtained from frozen, idle and excess inventories. Because the sheet steel supply is still tight, use of steel from rolling mill supplies for this purpose is still prohibited. Previous restrictions prohibited the use of any metal jackets, except for oil fired units, and manufacturers have been making fiberboard jackets as substitutions. Fiberboard is not readily obtainable at present, so this action was taken to aid manufacturers in obtaining sufficient material to produce needed water heater jackets.

Yellow Cypress—Extension of the regulation governing sales of softwood lumber by distribution yards to include yellow cypress lumber, with the exception of heavier industrial sizes normally stocked and sold only by hardwood distributors, was the principal one of several changes made in this regulation, by amendment No. 5 to Second RMPR-215, effective May 22.

This action permits distribution yards to reflect recently-increased mill prices of these species in their selling prices. Under the GMPR which formerly covered such sales, sellers were limited to the highest price they charged during March 1942.

Distributors' prices are computed by adding together the f. o. b. mill ceiling prices, the inbound transportation charge from a specified basing point and a $5 handling charge, and adding to the sum a specified percentage mark-up based on this sum. Mark-ups established by the regulation are computed on the bases of over-all distribution yard operations, including all species, at GMPR levels.

Prices

Brass and Bronze Castings — The maximum prices of castings of 85-5-5-5 and 80-10-10 brass and bronze alloys have been restored to the level of October 1-15, 1941, by Amendment-5 to RMPR-125, effective May 24.

Maximum prices for all brass and bronze castings were reduced 1½ cents per lb. below this level on February 1, 1943, because of prior reductions in metal costs. On February 1, 1944, this reduction was modified to 1 cent and 1¼ cents per lb. for castings of the 85-5-5-5 and 80-10-10 metal specifications respectively, to adjust the previous reduction to reflect more accurately actual reductions in metal prices.

The April 1, 1944, increases in the maximum prices of 85-5-5-5 and 80-10-10 brass and bronze ingots has now cancelled the benefits of the earlier metal reductions for castings of these specifications and. in view of the estimated earnings position of the industry in 1944, the price reduction below the October 1941 level has been eliminated for these castings.

The total elimination of the February 1, 1944, reductions for these two groups, OPA said, in effect permits an increase of 1 cent per lb. for the 85-5-5-5 group of castings, and an advance of 1¼ cents for the 80-10-10 group. For castings of these same groups which have been priced by formula between February 1, 1943, and April 1, 1944, the same 1 cent and 1¼ cents increases are authorized.

Like increases, too, are authorized for castings for which price adjustments have been approved individually by OPA since February 1, 1943, and before April 1, 1944. Castings of the 85-5-5-5 classifications are used in a wide variety of products, including valves and other marine equipment, while the 80-10-10 group castings primarily are used as bearings.

Eastern Fence Posts — An amendment to RMPR-324 effective May 29, adds to this regulation a new schedule covering sales of unpeeled tamarack fence posts produced in Michigan, Wisconsin and Minnesota; and a new section placing imported posts of the listed species under the same controls as domestic listed species at all levels of distribution except producers' sales. Principally affected by the latter provision will be posts imported from Canada.

Electrical Cable—Three types of armored electrical cable, inadvertently omitted from the original listing, have been added to the list of manufacturers' dollars-and-cents ceilings by Amendment-9 to RPS-82, effective May 29.

The items added to the list, with prices varying according to size and shipping zones, are: (1) Armored leaded cable, 150-ft. coil—from $147.80 to $161.40; (2) Bare armored ground wire (solid), 250-ft. coil—from $32.12 to $66.90; and (3) Bare armored ground wire (stranded), 250-ft. coil—from $35.20 to $73.81.

Malleable Iron Castings—Effective May 31, Amendment No. 6 is designed to strengthen and clarify MPR 241 and to aid in enforcement of its ceiling prices. The changes parallel those made in the gray iron castings regulation in March.

Sellers of malleable iron castings who use the "base period" method of computing maximum prices are authorized to add overtime labor costs in calculating ceilings. OPA said that less than 10 per cent of the sales of all malleable iron castings is priced by the base period method and while this change will result in an increase of about 4 per cent in prices for the castings so priced, the over-all increase will be less than half of one per cent.

Sellers of castings under the "formula" method are permitted to recompute ceiling prices only once on any casting sold under that pricing method. Recomputation must be in pricing the first order received after completion of the primary order for which the original maximum price was computed. Formerly there was no limit on the number of recomputations that could be made. This resulted, said OPA, in a lack of stability in formula maximum prices and led to uncertainties both for sellers and buyers.

Sellers of castings under the "pre-base" pricing method, once they have chosen to use this method to price castings thirty days after the effective date of the amendment, may not shift over to the "formula" pricing method. Formerly, such shifts were permitted, resulting in uncertain maximum prices and making enforcement difficult.

The term "appropriate regional office" of OPA is amended to provide that where the seller owns two or more foundries located in different OPA regions, the appropriate regional office shall be the office for the region in which the seller's principal operating office is located. This definitely establishes the point where reports required by the regulation are to be filed and applications for adjustments processed.

Redwood—Amendment No. 6 to MPR-253, effective May 23, provides increases in ceiling prices for redwood lumber, the net effect of which will be to raise the average sales realization for all redwood lumber by $2.30 per M. b. m.

Western Fence Posts—MPR-536, effective May 29, controls listed species of Western red cedar and California redwood fence posts at all levels of distribution in 13 states and parts of 2 others, and specifically removes this area from the jurisdiction of RMPR-324, formerly titled "Fence Posts," but now, with its coverage restricted to the eastern area, titled "eastern Fence Posts." The area covered by the new regulation comprises the states of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming and specified counties in Texas and Oklahoma.

MPR-536 follows substantially the same pattern as RMPR-324 and does not change the prevailing price level for the Western species. The principal change revolves around the different marketing practices in the two areas.

GENERAL NEWS

Postwar Cushion in Excess Profits Tax

I.C.C. Bureau shows how high current tax payments may bring later refunds

Proceeding with its calculations of the possible impact on the railroads of a postwar business recession, one phase of which was noted in *Railway Age* of May 13, page 909, the Interstate Commerce Commission's Bureau of Transport Economics and Statistics has pointed out that the federal excess profits tax law contains refund provisions which, unless repealed, could serve as a "cushion" to diminish the shock of a depression. These provisions are analyzed in the current issue of the bureau's "Monthly Comment on Transportation Statistics."

Not Shown in I. C. C. Figures—In this connection, the bureau explains that, while corporations are subject to a normal income tax of 24 per cent, a surtax of 16 per cent, and an excess profits tax of 95 per cent on income in excess of certain credits, the amount of the excess profits tax is subject to a postwar refund of 10 per cent which a railroad may take currently for debt retirement, subject to certain limitations. In the commission's income accounting, excess profits taxes are currently accrued as though the rate were 85.5 per cent, thus giving effect to this refund, it points out, and no further consideration need be given this refund provision in the interpretation of monthly reports of railway income.

On the other hand, corporations are permitted to combine their incomes and losses over a 5-year period in computing these taxes, the comment continues, the current year being taken as the center of the period for each such report. Thus the final determination of the amount of the tax for any given year may depend on sub-normal earnings in the two years preceding or following. If a company's earnings are sharply reduced in the two years following that on which it has paid a substantial excess profits tax, final calculation of the amount of the tax may show that it is entitled to claim a refund on account of overpayment. If the claim is allowed by the government, the company's net income reported to the commission would be increased by the amount of the overpayment.

If Business Turns Bad—While this "carry-back" provision will be relatively unimportant if the railroads have normal incomes for a succession of years following the war, the bureau explains, it is capable of materially affecting the net of any company that now pays a substantial excess profits tax if it suffers a serious postwar income curtailment. The shock of a depression, in other words, would thus be transferred, in some degree, from the railroad to the federal treasury.

The report illustrates the possible effect of this carry-back feature of the law by showing how, in a hypothetical situation, a road might pay, in the last war year, taxes totaling over $43 million, yet, on account of showing a $6 million net deficit in income before taxes in one of the two following years, subsequently recalculate its tax for the war year and become entitled to a refund of over $15 million thereon, or enough to wipe out the deficit and leave a substantial net income for the bad year.

Many Roads Have No "Excess"—The effect of the carry-back would vary greatly among roads in different income categories, the bureau remarks, since in 1943 about one-half the Class I roads reported no federal excess profits taxes. Of the $828 million total excess profits taxes reported—with a few roads not included—one railroad paid nearly one-eighth, and the 12 largest taxpayers accounted for more than 70 per cent of the total paid. While these roads with the largest carry-back possibilities are least likely to need them if there is a sharp business recession soon after the war, it adds, almost all roads paid normal income taxes and surtaxes that

(*Continued on page 1132*)

Aircraft Builder Claims 7¢ Ton-Mile Cost

Quite a number of governmental and free-lance "experts" have given estimates of post-war air freight transportation costs at minute fractions of actual accomplishments to date—but responsible spokesmen for the air transport and plane manufacturing industry have, heretofore, been rather chary of specific predictions of cost figures in the single-digit category.

Now, however, comes the Glenn L. Martin Company, in an advertisement in the New York Times of June 4, and reports that operating costs of its 72-ton "Mars" are under 15 cents per ton-mile; that an 82-ton craft now building will touch 10 cents at 80 per cent cargo capacity; and that "7 cents is in sight."

The advertisement asserts that rail express rates on deep-frozen foods are 16 cents per ton-mile, and that "Mars" transports can beat that rate by operating at 25,000 ft. altitude where refrigerants will not be needed.

B.I.R. Would Relax Trucker Restrictions

Report recommends legislation requiring I. C. C. to take such action

Legislation directing the Interstate Commerce Commission to suspend for the duration of the war various restrictions in motor carrier certificates and permits has been recommended by the Board of Investigation and Research in another report of its "economy and fitness" series which went to President Roosevelt and Congress on June 2. The board would have the suspensions ordered in connection with an extension beyond the present December 31, 1944, expiration date of that provision of the Second War Powers Act which now merely authorizes the commission to make such suspensions; but it goes on to recommend also amendments to the Interstate Commerce Act's Part II for the purpose of effecting "permanent liberalization" of the restriction.

Implied Criticism of I.C.C.—The report on "Federal Regulatory Restrictions upon Motor and Water Carriers" was submitted in summary form, with a promise of a complete report to be filed later. It was prepared by Dr. James C. Nelson, assistant director of research in charge of the board's regulatory studies.

The restrictions which the board would suspend for the duration are identified in the press release announcing the report as those "hampering the operating efficiency of motor-freight carriers." More specifically, they are listed as follows:

1. All commodity restrictions except those which reflect the fact that the carrier cannot practically use its specialized vehicles to haul commodities other than those authorized.
2. All routes restricted which require unnecessary circuitous movement over specified routes or through gateway points.
3. All territorial restrictions which prevent carriers from serving all points within their authorized territories or points through which their vehicles pass while rendering service in such territories.
4. All return-haul restrictions which prevent carriers from rendering service between points in both directions.

Would Largely Abolish Restrictions—In proposing "permanent liberalization of the restrictions" the board recommended that Part II of the Interstate Commerce Act be amended in order that:

1. Special commodity restrictions shall be limited to carriers whose service is of such specialized nature as to be unsuited to the transportation of general commodities, but such restrictions shall not prevent the carrier from using its equipment for transportation of such commodities as are necessary to provide adequate and economical loads, outbound and inbound.
2. Route restrictions which require unnecessary circuitous movement over specified highways or through gateway points or unnecessary move-

(*Continued on page 1134*)

4 Months Income Was $199,000,000

April's $50,100,000 marked the eleventh consecutive month in declining trend

Again indicating a decrease from the same month last year, net income totals for April brought the estimated net income, after interest and rentals, of Class I railroads for the first four months of this year to $199,000,000, as compared to $292,350,973 in the same period of 1943, according to the Bureau of Railway Economics of the Association of American Railroads. The net railway operating income, before interest and rentals, for the first four months of 1944 was $350,284,506, compared with $473,735,012 in the corresponding period last year.

Operating Net Off 19%—The estimated net income for April was $50,100,000, compared with $82,901,254 in April, 1943; while the net railway operating income was $87,674,351, compared with April, 1943's $128,669,507. April was the eleventh consecutive month in which the net earnings of these carriers showed a decline, the A.A.R. statement pointed out.

In the twelve months ended with April, the rate of return on property investment averaged 4.63 per cent, compared with 6.05 per cent for the twelve months ended with April, 1943.

Operating revenues for April totaled $759,534,145, compared with $748,738,925 in April, 1943, while operating expenses totaled $509,003,803, compared with $442,117,952. The four-months gross totaled $3,032,540,556, compared with $2,839,736,697 in the same period of 1943, an increase of 6.8 per cent. Operating expenses amounted to $2,032,544,063 in the same period, compared with $1,724,139,940, an increase of 17.9 per cent.

Taxes Moderating—Class I roads in the four months paid $586,054,875 in taxes compared with $579,786,350 in the same period in 1943. For April alone, the tax bill amounted to $146,019,115, a decrease of $15,642,829 or 9.7 per cent below April, 1943.

Nineteen Class I roads failed to earn interest and rentals in the four months, of which 11 were in the Eastern district, one in the Southern region, and seven in the Western district.

Class I roads in the Eastern district in the first four months had an estimated net income of $84,000,000 compared with $113,784,387 in the same period of 1943. Their net railway operating income was $145,724,654 compared with $188,692,674.

Operating revenues in the Eastern district in the four months totaled $1,334,029,855, an increase of 5.4 per cent compared with the same period in 1943, while operating expenses totaled $948,611,457, an increase of 15.8 per cent.

In the Eastern district in April the estimated net income was $21,300,000, compared with $36,647,566 in April, 1943. Net railway operating income amounted to $36,716,856 compared with $55,445,456.

In the South—Class I roads in the Southern region in the four months had an estimated net income of $38,000,000, compared with $53,652,165 in the same period of 1943. Their net railway operating income was $59,834,240, compared with $76,670,172.

Gross in the Southern region in the four months totaled $446,333,463, an increase of 3.6 per cent compared with the same period of 1943, while operating expenses totaled $271,543,588, an increase of 14.5 per cent.

In the Southern region for April alone the estimated net income was $8,400,000, compared with $12,331,511 in April, 1943. Net railway operating income amounted to $14,202,335, compared with $18,414,126.

In the West—Class I roads in the Western district in the four months had an estimated net income of $77,000,000, compared with $124,914,421 in the same period of 1943. Their net railway operating income was $144,725,612, compared with $208,372,166.

Operating revenues in the Western district in the four months totaled $1,252,177,238, an increase of 9.5 per cent compared with the same period in 1943, while operating expenses totaled $812,389,018, an increase of 21.7 per cent.

In the Western district for April alone the estimated net income was $20,400,000, compared with $33,922,177 in April, 1943. Net railway operating income amounted to $36,755,160, compared with $54,809,925 in April, 1943.

CLASS I RAILROADS—UNITED STATES

	Month of April 1944	1943
Total operating revenues	$759,534,145	$748,738,925
Total operating expenses	509,003,803	442,117,952
Operating ratio—per cent	67.02	59.05
Taxes	146,019,115	161,661,944
Net railway operating income (Earnings before charges)	87,674,351	128,669,507
Net income, after charges (estimated)	50,100,000	82,901,254
	Four Months Ended April 30, 1944	
Total operating revenues	$3,032,540,556	$2,839,736,697
Total operating expenses	2,032,544,063	1,724,139,940
Operating ratio—per cent	67.02	60.71
Taxes	586,054,875	579,786,350
Net railway operating income (Earnings before charges)	350,284,506	473,735,012
Net income, after charges (estimated)	199,000,000	292,350,973

Hobbs Bill Again Rephrased

Still another version of the proposal of Representative Hobbs, Democrat of Alabama, to so amend section 77 of the bankruptcy act as to restrict the authority of the Interstate Commerce Commission in reducing the capitalization of railroads undergoing reorganization reached the House on June 6, when he introduced H. R. 4960. This bill incorporated slight changes in the language of the bill (H. R. 4873) for the same purpose which he recently introduced, as reported in *Railway Age* of June 3, page 1087, and thus further modifies the original bill, H. R. 2857, which was the subject of hearings before a subcommittee of the House judiciary committee last fall.

Tells Cost of New Job Insurance Bill

Avoids yearly appropriation for benefit payments; limits judicial review

Discussion by Murray W. Latimer, chairman of the Railroad Retirement Board, of the provisions of the proposed new Railroad Social Insurance Act, H. R. 4805, was completed last week before the House committee on interstate and foreign commerce. The committee then adjourned hearings on this measure to a time to be set by the chairman, Representative Lea, Democrat of California. Railroads and other employers covered by the bill are expected to present their views at later sessions, and the Association of American Railroads' member roads meeting at Chicago on June 6 had the subject under consideration.

Continuing the testimony reported here last week, Mr. Latimer, in explaining the terms of the new legislation covering railroad unemployment insurance benefits and changes in the taxing and administrative provisions of the statutes it would replace, filled in certain details of the outline that had previously been submitted to the committee.

Sickness Benefits—Among the most important changes would be the extension of the unemployment provisions to include temporary sickness resulting from injury and disease from non-occupational causes. Benefits are payable under the existing unemployment insurance law only if the employee is able to work, the committee was reminded. The bill under consideration would provide sickness benefits tied into the unemployment insurance system, and on substantially the same financial basis. A person who qualified by earning $150 or more in wages during the base year would be eligible for both unemployment and sickness benefits for the maximum period of 130 days, and he would be permitted to include days of unemployment and sickness in the same benefit period.

A new category of railroad unemployment compensation would be set up in the form of separate maternity benefits, to be payable for 58 days up to and including the date of birth of the child and for 58 days following that date. The rate for the first 14 days of each such prenatal and postnatal period would be 1½ times the normal rate, so that the total maternity benefit payable would be equal to the 130-day maximum sickness benefit.

Another provision of the bill would put military service credits for the purposes of determining unemployment benefits on the same basis as has been set up for the retirement categories, compensation to be "imputed" for such service at the rate of $160 per month, with the government, as is the case now under the retirement act, paying into the unemployment insurance account a sum equivalent to the contributions due on wages of that amount.

Accounting Mechanism—The R. R. B. chairman's general explanation of the bill

pointed out that the existing distinctions between "taxes" and "contributions," as these terms are used in the present Carriers Taxing Act and Railroad Unemployment Insurance Act, respectively, would be continued under the new law, if it is enacted. However, beginning with the first calendar year after such action, the Railroad Retirement Board would act as the collecting agency for the specified taxes, depositing the proceeds in the federal Treasury just as it now deposits the proceeds collected under the unemployment insurance law. All taxes collected by the board would be deposited in the railroad retirement account, it was explained, and Congress would make regular appropriations from this account to cover the board's administrative expenses. In this way, no annual appropriation for the benefit payment account would be required.

As previously reported in *Railway Age*, the new bill would result in an ultimate increase of 5 per cent in the tax rates presently scheduled under the Carriers Taxing Act, divided equally between employee and employer. The present rate of 3¼ per cent payable by each party would be increased for the years 1945, 1946, and 1947 to 5¾ per cent for each, while in 1948, 1949, and 150 the rate for each would become 6 per cent, and in 1951 and thereafter it would be 6¼ per cent on each party. The increase of 5 per cent was arrived at by allowing 3½ per cent for the net additional cost of the new provisions of the bill, and 1½ per cent to care for the estimated additional cost of the present act's requirements. This estimate of the probable additional cost of supporting the present retirement system, it was pointed out, is probably a minimum figure, while, on the whole, the tax figures set forth were said probably to represent an underestimate of the requirements of the final actuarial situation.

What Cost Would Be—Additional costs to result from new benefit provisions would total 4.45 per cent, Mr. Latimer's summary indicated, but would be offset to the extent of 0.95 per cent by savings due to the elimination of the present death benefits and of certain employment relationships, making the net increase on account of the new provisions, as stated, 3.5 per cent. The most costly new provision would be the survivors benefit feature, to support which a payroll tax of 3.2 per cent would be required. Other added costs would be 1.1 per cent on account of liberalized disability annuity provisions, 0.14 per cent to meet minimum annuity requirements, and 0.01 per cent to cover changes in definitions. No change would be made in the present 3 per cent rate of "contributions" paid by the employer to the unemployment insurance account, but the bill would authorize the transfer to that account from the Treasury's general funds of the government's payments on account of military service.

In addition to setting up definite procedures for the treatment of claims for benefits, hearings, appeals, and other internal activities of the board, so that operations under the consolidated insurance statute would be uniform, the new bill is "much more definite" than the present retirement act as to the limitations on the scope of judicial review of the board's findings, being designed to make it clear that a court review of the board's decisions will not involve consideration of the facts, but will center on the legality of the use of the facts. An appeal on such grounds from a board finding would go, not to the district court, but to the circuit court of appeals.

O. R. C. Membership Drive

The five members of the Order of Railway Conductors who, during the 30-day "Fraser Membership Campaign" now in progress, secure the largest number of new members will be invited to attend the "big birthday celebration" at the Grand Division, Executive Office, in Cedar Rapids, Ia., in July, with compensation for lost time up to $10 a day and $6 a day expenses, the May issue of "The Railway Conductor" has announced. The brotherhood organ further states that any member securing at least 10 petitions during the campaign will have his name placed on the permanent Roll of Honor, to be presented to the O. R. C. president. "This is your opportunity to honor Harry Fraser and to express your approval and appreciation of his handling of the wage dispute last winter," the announcement reads.

Hearing on Bill to Give B. I. R. Four More Years of Life

Hearings were scheduled to begin June 9 before a Senate interstate commerce subcommittee on S. 1836, the bill introduced by Senator Stewart, Democrat of Tennessee, to extend the life of the Board of Investigation and Research for an additional four years—until September 18, 1948.

Senator Stewart is chairman of the subcommittee, the other members being Senators Hill, Democrat of Alabama, and Shipstead, Republican of Minnesota.

A. A. R. Raps Unemployment Insurance Bill

A resolution criticizing the proposed railroad unemployment insurance bill that has been introduced in Congress by Representative Crosser of Ohio, was adopted at a meeting of the Association of American Railroads in Chicago on June 6. J. J. Pelley, president of A. A. R., charged that passage of the proposed bill not only threatens the present railroad retirement system, but would also increase railroad payroll taxes by 40 per cent, or $100,000,000 in 1944. Under the present retirement set-up, an employee pays 3¼ per cent of his monthly salary up to $300 into the retirement fund while the railroad contributes 6¼ per cent. Under the Crosser bill, the total tax would be increased from 9½ per cent to 14½ per cent, and provisions of the present retirement system would also be extended to new employees and new classes of workers, including freight forwarders.

Mr. Pelley pointed out that, under the present act, more than $500,000,000 has already been accumulated in the reserve fund, and this total is rising constantly. For this reason, he contended that the retirement fund can be maintained at a safe level without the proposed legislation.

Leiserson Resigns from National Mediation Board

Reports of the resignation of William L. Leiserson, chairman of the National Mediation Board, were confirmed June 8, with the explanation that he will remain with the Board until his successor is appointed. He also has resigned from the National Railway Labor Panel, of which he was likewise chairman. The panel was created by President Roosevelt's executive order of May 21, 1942, to provide wartime procedures whereby labor-mediation disputes in the railroad industry may be submitted to emergency fact-finding boards without the necessity for taking strike votes.

Dr. Leiserson has been chairman of N. M. B. since February, 1943, when he returned to that agency after a period of duty with the National Labor Relations Board. He had previously served on N. M. B. from 1934 until 1939. It is understood that George M. Cook, now a member of N. M. B., is in line for the chairmanship.

Dr. Leiserson is leaving the government service to accept a visiting professorship at Johns Hopkins University, and it is understood that he is engaged in preparing a book on labor relations. Reports that he had resigned, effective May 31, on which date he had an appointment with President Roosevelt, were prevalent in Washington last week. When the President was asked to comment on these reports at his June 2 press conference, he stated that he expected to have a story soon involving the N. M. B. head, but it had not been released when this issue went to press.

Highway Bill Reported

The House roads committee's final version of the post-war highway bill was reported favorably this week with provisions authorizing appropriations totaling $1,500,000 to become available at the rate of $500,000,000 a year for each three successive post-war fiscal years. The bill is H. R. 4915, and it supplants H. R. 4853 previously introduced by the committee's chairman, Representative Robinson, Democrat of Utah, as noted in the *Railway Age* of June 3, page 1090.

Likewise its supplants H. R. 2426, the original version which had called for expenditures totaling $3,000,000,000 to become available at the rate of $1,000,000,000 a year. The committee report on H. R. 4915 included the minority view of Representative Mott, Republican of Oregon, who will support the lower outlay even though he thinks a billion dollars a year is the "minimum amount required for an adequate post-war highway program."

A Superhighway System—The committee-approved bill provides that the $500,000,000 a year it authorizes shall be spent as follows: $225,000,000 on the federal-aid highway system; $125,000,000 the principal secondary and feeder roads, farm-to-market roads, R. F. D. and public-school bus routes; $150,000,000 "for projects on the principal

highways in urban areas on the federal-aid highway system." There is also provision for the designation of a "National System of Interstate Highways not exceeding forty thousand miles in total extent. . . ." Highway departments of interested states or adjoining states would select the routes.

The provision with respect to grade crossings stipulates that the entire cost of eliminations may be paid from federal funds, except that not more than 50 per cent of the right-of-way and property damage costs, paid from public funds on any such project, may be paid from federal funds. Other provisions change the formula for apportionment of funds among the states, giving greater weight to population; and provide that in the first post-war year the matching basis shall be 60 per cent federal funds to 40 per cent state funds, with a reversion to the 50-50 formula thereafter.

April Earnings in Canada

The two principal Canadian railways reported April earnings and expenses as follows:

Canadian National

April	1944	Decrease
Gross	$34,993,000	$3,451,000
Expenses	28,275,000	835,000
Operating Net*	$6,718,000	$2,616,000
4 Months		
Gross	$139,821,000	+$5,670,000
Expenses	114,411,000	+ 7,074,000
Operating Net*	$25,410,000	$1,404,000

Canadian Pacific

April	1944	Increase
Gross	$25,753,427	$1,707,813
Expenses	21,848,861	1,594,135
Net*	3,904,566	113,696
4 Months		
Gross	$100,601,420	13,273,167
Expenses	86,929,821	12,069,880
Net*	$13,671,599	1,203,287

*Net as shown in this tabulation for the C. N. R., is equivalent to "Net Operating Revenue" in U. S. accounting terminology, while the net shown for the C. P. R. corresponds to "Net Railway Operating Income" in U. S. terms.

Trans-Missouri-Kansas Board Meeting

The Trans-Missouri-Kansas Shippers Board will hold its 69th regular meeting at the Hotel Muehlebach, Kansas City, Mo., on June 14. General transportation conditions will be discussed at the morning session, while the local grain situation will be considered at the afternoon session.

H. H. Laude, agronomist of the Kansas Agricultural Experiment Station, will discuss the Effect of Conditions on Growth of the Wheat Crop. At the luncheon meeting, Clyde M. Reed, United States senator from Kansas, will speak on First Things First.

Judgments Entered on Minimum Weight Violation Charge

Secretary W. P. Bartel has disclosed that the Interstate Commerce Commission has been advised that judgments of $500 plus costs were entered May 18 in the federal court at Charleston, S. C., against the Atlantic Coast Line and the Southern, individually, in settlement of complaints under section 1 (17) (a) of the Interstate Commerce Act, charging violations of the commission's Service Order No. 68.

The court action grew out of allegations that each road had assessed freight charges on imported manganese ore upon the actual weight of the shipments, which was less than the minimum carload weight specified in the tariffs, and had permitted cars to be used for the movement of such carload shipments at less than the required minimum carload weight.

1943 Crossing Accidents

Accidents at rail-highway grade crossings in 1943 brought death to 1,732 persons and injuries to 4,217, as compared with 1,970 deaths and 4,616 injuries in 1942, according to the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. Crossing accidents last year totaled 3,781, compared with 4,150 in the previous year.

Compared with the pre-war year of 1940, the Bureau points out, the 1943 totals were lower by 7.87 per cent for the number of accidents, 4.2 per cent for fatal injuries, and 8.96 per cent for non-fatal injuries. "The effect of wartime driving restrictions," it adds, "is reflected in these reductions since rail traffic in 1943, measured by train-miles in transportation service, exceeded that of 1940 and 1942 by 33.45 and 6.39 per cent, respectively."

A Principal Cause of Fatalities—Notwithstanding the decline, however, grade-crossing accidents "still comprise an important segment of the total number of casualties arising from railway accidents of all kinds." The 1943 deaths from crossing accidents constituted 36.99 per cent of the fatalities in all accidents resulting from train operation. The comparable 1942 figure was 39.38 per cent.

Passenger automobiles were involved in 59.96 per cent of all 1943 crossing accidents. In the pre-war year of 1940, autos were involved in 70.59 per cent. Meanwhile, motor trucks were involved in 22.85 per cent of last year's total, an increase from their 1940 share of 18.93 per cent. Pedestrian accidents also have become more important since 1940 relatively to the total, the percentage rising from 7.02 to 12.09. Last year, 304 pedestrians were killed by trains at grade crossings, compared with 197 in 1940, an increase of 58.68 per cent.

Accidents at Protected Crossings—Crossing accidents in which motor vehicles were involved in 1943 totaled 3,206 or 84.79 per cent of the total. They accounted for 1,396 fatalities and 3,960 injuries. In 38.71 per cent of the total number of accidents involving motor vehicles, the crossing was protected by lowered gates, watchmen, trainmen, or audible or visible signals which indicated the approach of trains.

Accidents involving freight trains and passenger trains were nearly equally divided, collisions with freight trains numbering 1,397 and those with passenger trains, 1,317. Standing freight trains were involved in 7.8 per cent of the train-motor vehicle accidents; in 76.67 per cent of the total, the train was either standing or moving at a speed under 30 m. p. h. With respect to passenger trains, 33.56 per cent of the accidents occurred when the train was running at speeds between 10 and 29 m. p. h.; but train speeds in excess of 60 m. p. h. were reported in 21.64 per cent. In 62.94 per cent of the accidents the speed of the motor vehicle was reported as "standing" or moving at a speed under 30 m. p. h.

December was the 1943 month in which the greatest number of fatal accidents occurred. In 1942 it was January. Saturday remains the day of greatest accident frequency, there having been no change in that respect since 1935 when the classification was first made. Fifty-four per cent of the total number of accidents occurred in daylight, while 71.77 per cent happened when "clear" weather prevailed.

April Accident Statistics

The Interstate Commerce Commission on June 6 made public its Bureau of Transport Economics and Statistics preliminary summary of steam railway accidents for April and this year's first four months. The compilation, which is subject to revision, follows:

Item	Month of April 1944	Month of April 1943	4 months ended with April 1944	4 months ended with April 1943
Number of train accidents*	1,286	1,267	5,517	5,695
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	126	129	420	470
Injured	92	111	343	416
Passenger on trains:				
(a) In train accidents*				
Killed	..	1	7	4
Injured	141	267	472	693
(b) In train-service accidents				
Killed	4	3	18	15
Injured	258	206	887	804
Travelers not on trains:				
Killed	2	3	7	5
Injured	106	84	379	389
Employees on duty:				
Killed	68	69	362	325
Injured	3,459	3,513	14,940	14,579
All other nontrespassers:**				
Killed	169	155	752	729
Injured	438	450	2,437	2,364
Total—All classes of persons:				
Killed	369	360	1,566	1,548
Injured	4,494	4,631	19,458	19,245

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than $150 to railway property.

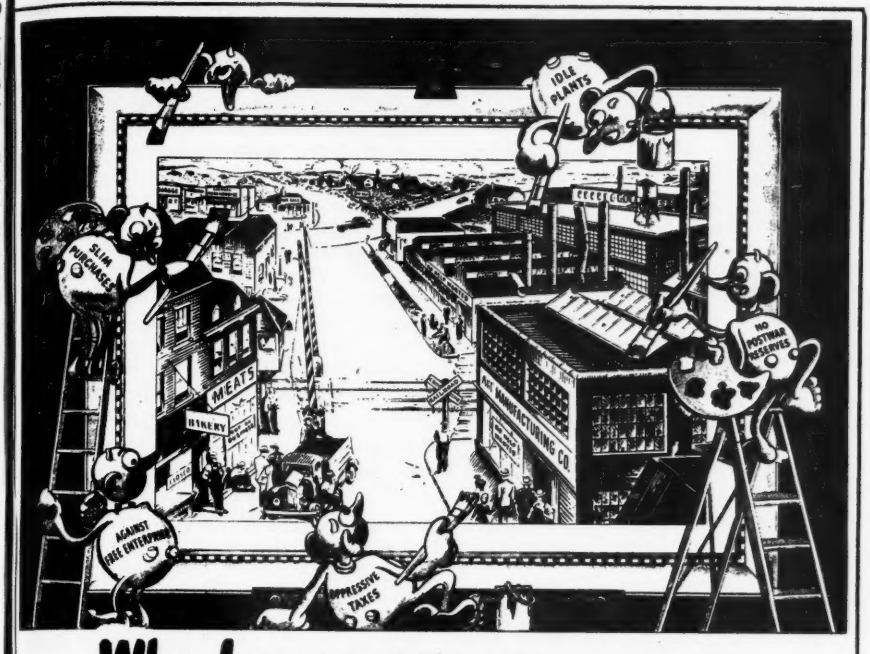
** Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and nontrespassers,* were as follows:

Persons:				
Killed	158	134	683	630
Injured	228	269	1,487	1,432

L. & N. Warns of "Gremlin" Attack on Railroads

"Who loses if 'Gremlins' paint the post-war picture?" Answer to this question is suggested in an advertisement which appeared recently in 300 newspapers along Louisville & Nashville lines. "You lose—even in normal times—without efficient railroads," the message reasons, and "if the railroads are handicapped in wartime, everybody loses."

The illustration which is reproduced herewith accompanied the L. & N. advertisement. Several gremlins are seen at work on a typical Main Street. Busy with brushes and palettes, they are identified as "oppressive taxes," "against free enter-



Who Loses if Gremlins paint the postwar railroad picture?

You lose—even in normal times—without efficient railroads. So does "the butcher, baker and candlestickmaker," the farmer, merchant, industrialist, and every other person adversely affected by poor

The Old Reliable L&N, a product of Free Enterprise, privately owned and operated, and directed by men who love the South and its traditions, has for 94 years turned its ...loping its territory industrially ...*ts ye should*

and to advance the welfare of its communities—for therein lies its own well-being.

President

The L&N in 1943—

Paid for labor.....$77,537,000

Paid 67,977,000

prise," "slim purchases," "idle plants," and "no postwar reserves."

Terming itself as a "product of Free Enterprise," the Louisville & Nashville asks for the future, "nothing more than fair and equal treatment as to laws, regulations and subsidies," adding that "it has no more earnest purpose than to serve acceptably, and to advance the welfare of its communities—for therein lies its own well-being."

Pullman Employee Receives $2,275 for Suggestion

The largest award so far to be paid under the suggestion system of the Pullman Company, $2,275, was received by John H. Prince, assistant storekeeper at the company's Calumet, Ill., shops on June 2. He proposed that the worn gear units used to drive generators and air conditioning equipment on lightweight Pullman cars be reconditioned at the shops instead of being returned to the manufacturer for overhauling. Since the idea was placed in effect more than a year ago, the company has saved $23,228, after spending $17,951 for new tools and equipment for reconditioning 163 units.

Recommends Claim Agents Become Part of A. A. R.

A recommendation that the Association of Railway Claim Agents become a section of the Association of American Railroads was recommended by James J. Donohue, general attorney of the Louisville & Nashville, at the annual meeting of the Association of Railway Claim Agents at Chicago on May 24 and 25. Members passed a motion to appoint a committee to consider the matter and confer with the A. A. R.

Officers elected for the ensuing year are: President O. F. Gnadinger, claim agent of the Elgin, Joliet & Eastern, Chicago; vice-presidents, M. B. Pears, general claim agent of the Southern Pacific, New Orleans, La.; H. C. Minning, chief claim agent of the Erie, Cleveland, Ohio; and H. A. Fathauer, chief claim agent of the New York Central, Chicago; and secretary-treasurer, F. L. Johnson, claim agent of the Alton, reelected.

Mr. Donohue suggested that this association be admitted as a section of the A. A. R., "as a possible means to the end that never again, without consulting us, will a position be taken with respect to federal legislative measures that directly affect the interests of the claim departments of railroads. I have in mind measures like a railroad workmen's compensation bill or the 1939 amendment to the Federal Employers' Liability Act, which amendment has not only proved most costly to the railroads but is the forerunner of a line of opinions handed down by the Supreme Court of the United States, revolutionary in character, that will plague railroads for years to come. With respect to such measures our organization, in the very nature of things, is the one in a position to give dependable advice. Furthermore, it is not too much to say that our Association, representing, as it does, one of the great money-spending units of the railroad organization, should be represented on the postwar planning committee now at work, or members, nominated by the Association, could profitably be used on three subcommittees—Legislative, Public Relations and Employee Personnel."

Other subjects considered at the meeting were: Recent Trends Under the Federal Employer's Liability Act as Amended, by Dwight B. Buss of Baker, Hostetler & Patterson, division counsel of the Baltimore & Ohio; Drugs and Accidents, by Smith R. Brittingham, senior general attorney of the Seaboard Air Line; Lent Servant Doctrine, by A. W. Blackman, counsel and attorney of the New York, New Haven & Hartford; First Aid Stations, by M. B. Strong, district claim agent of the Pere Marquette; Herniation of the Intervertebral Disc, by Dr. Paul B. Magnuson; After the Tiller Case, by L. R. Willis, assistant general claim agent of the Chesapeake & Ohio; and Handling of Marine Claims, by Robert Schwebel, division attorney of the Baltimore & Ohio.

April's Truck Tonnage 6.1 Per Cent Below 1943

Freight traffic handled in April by motor carriers reporting to American Trucking Association, Inc., was seven per cent under the March volume and 6.1 per cent below April, 1943, according to A.T.A.'s latest monthly report. Returns, received from 346 motor carriers in 47 states and the District of Columbia, showed that the reporting truckers transported an aggregate of 2,699,451 tons in April, compared with 2,900,790 tons in March, and 2,875,748 tons in April, 1943.

The sharpest drop occurred in the New England states where the April volume was 15.8 per cent below March, and 26.4 per cent below April, 1943. "Strikes in that area were the prime reason for this sharp recession," the A.T.A. statement said. The A.T.A. index, based on the 1923-40 average monthly tonnage of the reporting carriers, was 172.12 for April as compared with March's 187.5.

Santa Fe to Study Electronics

The Atchison, Topeka & Santa Fe plans to "fully explore and develop the use of electronics, particularly in the application of carrier and radio type communication to railway service in terminal and yard operations, between the front and rear of trains, between trains enroute and dispatchers, on work equipment during emergencies, for control of train operation from a fixed point, for remote control of switches from locomotives, and for bridging gaps during wire line prostrations." To carry out the studies, L. R. Thomas, system telegraph engineer, has been appointed electronics engineer.

Mr. Thomas was born in Odessa, Mo., on May 18, 1911. He attended grammar and high school and later completed a course in electronic engineering at the National Schools, Los Angeles, Cal. He has operated amateur radio stations, and has been a student of electronics for the past twelve years. First employed by the Santa Fe as an apprentice operator at Needles, Cal., in September, 1928, Mr. Thomas graduated in September, 1930, and served as operator

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I STEAM RAILWAYS

Compiled from 131 reports (Form IBS) representing 135 steam railways
(Switching and Terminal Companies Not Included)

	Income Items	All Class I Railways			
		For the month of March		For the three months of	
		1944	1943	1944	1943
1.	Net railway operating income	$92,503,962	$131,384,395	$262,610,152	$345,065,505
2.	Other income	13,854,986	12,643,120	41,905,629	37,711,812
3.	Total income	106,358,948	144,027,515	304,515,781	382,777,317
4.	Miscellaneous deductions from income	2,712,438	2,547,851	7,999,762	6,835,689
5.	Income available for fixed charges	103,646,510	141,479,664	296,516,019	375,941,628
6.	Fixed charges:				
	6-01. Rent for leased roads and equipment	12,963,574	15,794,898	37,540,036	45,189,474
	6-02. Interest deductions[1]	34,488,504	36,569,433	103,273,879	109,307,643
	6-03. Other deductions	148,740	130,617	388,682	379,496
	6-04. Total fixed charges	47,600,818	52,494,948	141,202,597	154,876,613
7.	Income after fixed charges	56,045,692	88,984,716	155,313,422	221,065,015
8.	Contingent charges	2,393,072	2,331,643	7,092,444	6,798,368
9.	Net income	53,652,620	86,653,073	148,220,978	214,266,647
10.	Depreciation (Way and structures and Equipment	26,309,030	26,447,430	79,228,827	79,160,947
11.	Amortization of defense projects	15,650,861	10,486,118	43,170,201	30,346,986
12.	Federal income taxes	115,007,453	119,128,142	309,782,322	300,103,742
13.	Dividend appropriations:				
	13-01. On common stock	5,337,709	5,176,214	25,517,265	23,469,388
	13-02. On preferred stock	697,906	314,042	5,778,034	5,525,963
	Ratio of income to fixed charges (Item 5 ÷ 6-04)	2.18	2.70	2.10	2.43

	Selected Asset and Liability Items	All Class I Railways — Balance at end of March	
		1944	1943
20.	Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	$589,556,044	$548,863,276
21.	Cash	1,003,294,125	1,064,546,341
22.	Temporary cash investments	1,754,454,512	933,936,890
23.	Special deposits	192,549,134	163,512,799
24.	Loans and bills receivable	245,454	310,650
25.	Traffic and car-service balances—Dr.	54,165,478	47,081,927
26.	Net balance receivable from agents and conductors	149,229,952	168,780,699
27.	Miscellaneous accounts receivable	678,452,688	507,089,641
28.	Materials and supplies	569,441,739	514,991,938
29.	Interest and dividends receivable	23,073,958	18,464,728
30.	Rents receivable	1,834,411	1,190,379
31.	Other current assets	55,192,408	14,840,937
32.	Total current assets (items 21 to 31)	4,481,933,859	3,434,746,929
40.	Funded debt maturing within 6 months[2]	105,984,805	123,345,799
41.	Loans and bills payable[3]	16,284,506	16,911,340
42.	Traffic and car-service balances—Cr.	207,307,918	122,545,403
43.	Audited accounts and wages payable	493,487,063	357,203,925
44.	Miscellaneous accounts payable	113,442,093	85,714,898
45.	Interest matured unpaid	67,177,043	70,800,521
46.	Dividends matured unpaid	17,570,073	16,766,763
47.	Unmatured interest accrued	59,440,026	64,665,499
48.	Unmatured dividends declared	10,643,290	10,223,451
49.	Unmatured rents accrued	22,181,171	22,198,341
50.	Accrued tax liability	1,724,044,635	1,146,957,080
51.	Other current liabilities	108,628,151	64,588,302
52.	Total current liabilities (items 41 to 51)	2,840,205,969	1,978,575,523
53.	Analysis of accrued tax liability:		
	53-01. U. S. Government taxes	1,594,566,518	1,019,897,105
	53-02. Other than U. S. Government taxes	129,478,117	127,059,975

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.
[3] Includes obligations which mature not more than 1 year after date of issue.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

until June, 1934, when he was named wire chief. In July, 1939, he became telegraph and telephone supervisor for the Santa Fe with headquarters at Topeka, Kan. He was appointed system telegraph engineer in July, 1941, and in that capacity he handled the installation of the Santa Fe's telegraph and telephone carrier systems. In the course of this work he has developed intricate and efficient circuit designs, in one of which he used vacuum tubes in place of electrically operated mechanical relays.

1943 Forwarder Revenues

The 52 freight forwarders having annual gross revenues of $100,000 or more reported an aggregate 1943 net income of $1,326,615 after provision for income taxes, according to a compilation issued by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics.

Gross revenues amounted to $188,998,933, from which was deducted the 150,568,629 paid the various transportation agencies whose services were utilized. Railroads received $105,295,249; line-haul truckers, $23,267,721; water carriers, $527,983; pick-up and delivery and transfer agents, $20,-233,876; and "other transportation purchased," $1,243,800.

With these deductions and the addition of incidental revenues, the forwarders' "total operating revenues" became $39,205,-926; and operating expenses were $316,014,-775, leaving $3,191,151 in "revenues from forwarder operations." It was various tax and other deductions and fixed charges which brought the latter figure down to the $1,326,615 reported as net income.

Acme Fast Freight, Inc., National Carloading Corporation, and Universal Carloading & Distributing Company accounted for $136,409,096 of the $188,998,933 in gross revenues reported all 52 forwarders included in the compilation. Acme's gross was $43,411,760; National's, $43,441,554; and Universal's, $49,555,782. The compilation showed that the Acme and National returns indicated deficits of $250,699 and $144,429, respectively, in net income after provision for income taxes. Universal's net income after provision for income taxes was shown as $582,391.

During 1943, the 52 reporting forwarders received from their customers 21,136,509 shipments, aggregating 5,064,622 tons of freight.

Delay Expected on Senate's Confirmation of Barnard

Senate interstate commerce committee action on President Roosevelt's nomination of Commissioner George M. Barnard of the Indiana Public Service Commission to be a member of the Interstate Commerce Commission, succeeding the late Joseph B. Eastman, is expected to be delayed, pending the appointee's recovery from injuries received in a recent automobile accident. Mr. Barnard who is at his home in New Castle, Ind., was expected to be able to make the journey to Washington for a meeting with the committee within the next couple of weeks. When this issue went to press no protests against confirmation had been received by the committee.

M. & St. L. Fined $2,000

The Interstate Commerce Commission has been advised that on May 16, at Mason City, Ia., L. C. Sprague, as receiver of the Minneapolis & St. Louis, entered a written plea of guilty to counts 1 and 19 of a joint indictment pending in the Northern District of Iowa against the receiver and J. W. Devins, general manager for the receiver, and paid a fine of $1,000 on each of the two counts. The remaining counts of the 30-count indictment were dismissed as to the receiver and all counts were dismissed as to General Manager Devins.

The foregoing was announced last week by I. C. C. Secretary W. P. Bartel who went on to explain that the indictment, returned June 24, 1942, charged that the receiver and his general manager "offered, granted and gave to Fort Dodge Iron & Metal Company substantial concessions in respect of the transportation . . . of scrap iron and steel, which the latter had purchased from the receiver, by transporting the material free from Fort Dodge to Peoria, Ill., and Indiana Harbor, Ind. The scrap was gathered from points on the line of the railroad and transported by the carrier to Fort Dodge where it was unloaded into the yard of the Fort Dodge Iron & Steel Company and sorted."

Mechanical Division to Meet at St. Louis

Thirteen reports will be presented for discussion at the meeting of the Mechanical Division, Association of American Railroads, to be held in the Gold Room of the Jefferson Hotel, St. Louis, Mo., June 23 and 24. Addresses will be made by R. C. White, chief operating officer, Missouri Pacific; C. H. Buford, vice-president, Operations and Maintenance Department,

A. A. R.; Clyde Williams, director, Battelle Memorial Institute, and Technical Consultant, A. A. R., and R. G. Henley, general superintendent motive power, Norfolk & Western.

This will be the twentieth annual meeting of the Division and the first full-member meeting since 1941. The complete program for the coming meeting will appear in the June 17 issue.

Supply Manufacturers' Luncheon

The Railway Supply Manufacturers' Association has arranged for a luncheon for the members of the Mechanical Division of the A. A. R., at the Jefferson Hotel, on Friday, June 23. J. E. Brown, of the Magnus Metal Corporation, chairman of the luncheon committee, requests that all members of the R. S. M. A. register at the Association's headquarters at the Jefferson Hotel on their arrival in St. Louis.

Johnson to Address S. A. E.

"The War and Transportation" will be discussed at a dinner, June 28, by Col. J. Monroe Johnson, director, Office of Defense Transportation, at the National Transportation and Maintenance Meeting of the Society of Automotive Engineers to be held June 28 and 29, at the Bellevue-Stratford Hotel, Philadelphia.

Great Lakes Regional Advisory Board to Meet June 27-28

The 59th regular meeting of the Great Lakes Regional Advisory Board will be held at Hotel Statler, Buffalo, N. Y., June 27 and 28. Robert S. Henry, assistant to the president, Association of American Railroads, will be guest speaker at the luncheon at 1:00 p. m., June 28.

Speakers at the morning session, June 28, will include: Arthur E. Baylis, assistant director, Division of Traffic, Office of Defense Transportation, Washington, whose topic will be "The Traffic Job—After Two and One-Half Years of War"; C. R. Megee, manager, Open Car Section, A. A. R., commenting on "National Transportation Conditions"; and W. J. McCarry, manager, Ore and Coal Exchange, Cleveland, Ohio, who will discuss movement of ore and coal on the Great Lakes.

There will be reports from various commodity committee chairmen, picturing present conditions and what can be expected in this Board's territory.

At 9:30 a. m., June 27, there will be a meeting of the Executive and Railroad Contact Committees, and at 3:00 p. m., of the Loss and Damage Prevention Committee. All committees will report to the Board on the day following.

Power Trains for Russia

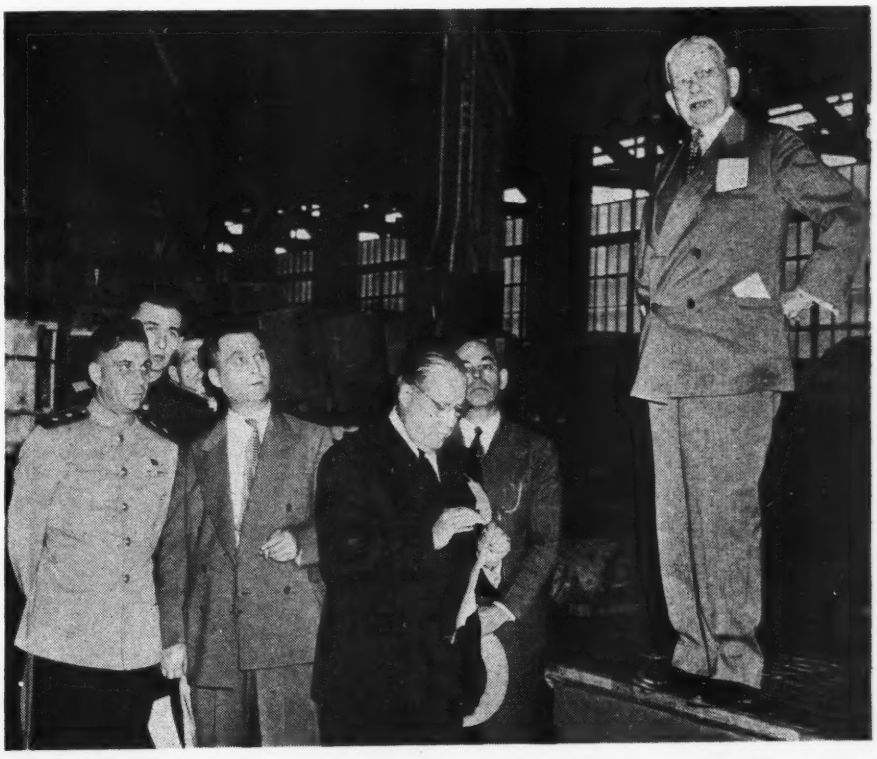
The first of forty 3,000-kw. power trains built by the General Electric Company and the American Car & Foundry Co., was formally delivered to the Russian Government at Berwick, Pa., on June 1. Presentation speeches were made by Charles J. Hardy, chairman of the board, American Car & Foundry Co., and C. W. Minor, president, International General Electric Company, and the train was accepted by Lieutenant General L. G. Rudenko, chairman of the Soviet Government Purchasing Commission in the United States.

The 3,000-kw. units, which consist of eight cars each, will be used to supply power in devastated areas. Twenty-three, 3-car, 1,000-kw. trains will also be supplied by these companies. During the presentation ceremony, the train was maintained in operation on a test track and was available for inspection, and a large delegation from various governmental agencies and interested industries was in attendance.

The 3,000-kw. mobile plant consists of seven or eight cars—depending upon the method of cooling. There are two boiler cars and tenders, one turbine car, one switchgear car, three cooling tower cars (or two radiator-type cooling cars), and one crew car. Thirty of the plants will have cooling tower cars; ten with radiator-type coolers.

The two boiler cars per power plant contain a fire-tube locomotive-type boiler designed to operate at 300 lb. gage, 600 deg. F. The boilers are coal-burning, employing poor grades of coal, such as lignites, with heat values of less than 7,000 B.t.u. per lb. Each boiler is rated 24,000 lb. of steam per hour. Induced draft is obtained by a centrifugal-type fan, driven from a geared steam turbine, and the turbine exhausts into a surface-type heater through which the

Five Cars of One of the Mobile Power Units—Including Two Boiler Cars, a Turbine Car, a Control Car, and One End of a Cooling Tower Car



Charles J. Hardy, Chairman of the Board, A. C. F., Makes Presentation Speech

Left to right: Lt. Gen. L. G. Rudenko, Chairman, Soviet Government Purchasing Commission; Capt. B. G. Prishchepenko, Assistant Chairman; I. A. Eremin, Member, Purchasing Commission; C. W. Minor, President, International General Electric Company; P. J. Gearhart, Assistant District Manager, A.C.F., Berwick, and Mr. Hardy.

condensate is pumped. The boiler is also equipped with an injector for emergency boiler feed, and automatic level feed control for normal operation. An adequate supply of coal and makeup water are carried on the tender car which is similar to that used on standard locomotives.

The turbine car contains a 3,000-kw., 0.8 power factor, 3,750-kva., 3-phase turbine-generator arranged to deliver power at either 6,300 or 11,000 volts. The condenser is of the surface type.

The switchgear car contains the main switchgear which is of the metal-clad type and houses the indicating and control apparatus for the main generator, together with three oil circuit breakers, one generator circuit and two feeder circuits.

The three cooling tower cars for each of 30 of the power plants contain redwood cooling surfaces, arranged in two cells. The two radiator-type cars for each of the other ten power plants contain cooling equipment consisting of tubes and fins assembled in units. Water is circulated through the inside of the tubes and air over the outside of the tubes and fins.

The crew car contains living and sleeping accommodations for the operators. A portion of the car is used as a maintenance room and test laboratory. The 1,000-kw. mobile power plant consists of three cars—one boiler car, one turbine and switchgear car, and one cooling tower car.

Freight Car Loading

Loadings of revenue freight for the holiday week ended June 3 totaled 810,772 cars, the Association of American Railroads announced on June 8. This was a decrease of 59,088 cars, or 7.3 per cent from the preceding week, an increase of 143,163 cars, or 21.4 per cent above the corresponding week last year, and a decrease of 43,917 cars, or 5.1 per cent from the comparable 1942 week.

Loading of revenue freight for the week ended May 27 totaled 869,860 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, May 27			
District	1944	1943	1942
Eastern	162,136	165,079	147,100
Allegheny	199,480	191,815	174,874
Pocahontas	56,918	58,433	57,594
Southern	123,425	120,710	124,558
Northwestern ..	133,295	133,056	124,687
Central Western	122,023	121,651	103,851
Southwestern ..	72,583	63,039	62,957
Total Western Districts	327,901	317,746	291,495
Total All Roads	869,860	853,783	795,621
Commodities			
Grain and grain products	41,125	43,426	32,869
Live stock	14,110	13,564	11,767
Coal	182,692	172,610	157,815
Coke	14,957	14,912	13,822
Forest products.	43,626	44,165	45,677
Ore	82,741	82,989	82,928
Merchandise l.c.l.	105,085	98,390	86,971
Miscellaneous ..	385,524	383,727	363,772
May 27	869,860	853,783	795,621
May 20	871,105	843,842	837,676
May 13	868,309	849,032	839,054
May 6	836,978	816,538	839,286
April 29	851,857	788,789	858,911
Cumulative Total, 22 Weeks ...	17,606,001	16,949,157	17,677,746

In Canada.—Carloadings for the week ended May 27 totaled 67,967 as compared with 71,233 for the previous week and 62,336 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Total for Canada	Total Cars Loaded	Total Cars Rec'd from Connections
May 27, 1944.....	67,967	38,416
May 20, 1944.....	71,233	39,028
May 13, 1944.....	72,612	41,362
May 29, 1943.....	62,336	37,880
Cumulative Totals for Canada		
May 27, 1944.....	1,440,647	834,592
May 29, 1943.....	1,313,357	821,809
May 30, 1942.....	1,323,575	677,621

Postwar Cushion in Excess Profits Tax

(*Continued from page 1125*)

also would be subject to recomputation on account of carry-back operating losses, so the benefit of the carry-back provision would be "in some degree generally applicable" in the case of widespread near postwar deficits.

The wide variation in the relative growth of railway revenues in 1943, as compared with prewar years, is shown in a tabulation by individual carriers in which the years 1930 and 1940 are taken as normal. 1943 revenues for all Class I roads were 169.4 per cent of the 1930 figure and 210.7 per cent of the 1940 figure, but within the 1930 ratio individual roads ranged from 108.5 per cent to 294.2 per cent, while the 1940 comparison included individual ratios as low as 140.3 and as high as 320.3.

Index Numbers—While the freight revenue of Class I roads for April, 1944, was below March in absolute amount, the index, adjusted for the season and the number of working days in the month, was slightly higher in the more recent month, the bureau's statement indicated. April passenger revenue was slightly below March in absolute amount, and the seasonally adjusted index also declined, being 451.7 as compared to 455.0. The highest index figure for passenger revenue last year was 449.8, which was reached in August. These revenue index figures are based on the 1935-1939 monthly averages as 100, adjusted for seasonal variations.

Operating expenses for April, 1944, totaled 15.1 per cent more than in the same 1943 month, while revenues increased only 1.4 per cent, the bureau remarks. The ratio of expenses to revenues increased in the same interval from 59.0 per cent to 67.0 per cent. Projecting the April results for a 12-month period, without giving effect to seasonal changes, expenses would amount to $802.8 million more than if figured on the same basis in 1943.

Another section of the statement deals with the reflection in freight car loading figures of wartime measures to increase the efficiency of car use. As compared with 1940, the average tons per carload of citrus fruit, for example, increased 30.0 per cent in 1943; of potatoes, 15.5 per cent; cured meats, 66.9 per cent: lumber, 22.5 per cent; iron and steel, 18.7 per cent; cement, 33.0 per cent; fertilizer, 21.6 per cent; and canned foods, 42.2 per cent.

R. I. Inaugurates Railroad Micro-Wave Station

On June 5, with an inaugural demonstration of station W-10-XTH, at Blue Island, Ill., the Chicago, Rock Island & Pacific became the first railroad to purchase and install its own radio station using micro-wave frequencies and frequency modulation. This installation, which provides two-way communication between switch engines and two yardmaster's offices in the Burr Oak (Blue Island), yards, is to be used

* * *

The "LSM-310"—First Landing-Ship-Medium Built at the Pullman-Standard Car Manufacturing Company Shipyards

News Department continued on next left-hand page

THE NEW YORK CENTRAL RAILROAD COMPANY

ANNUAL REPORT

To the Stockholders:

During the year 1943, transportation, and particularly rail transportation, again proved its indispensability to the war effort. This is amply recognized in statements of executives in all branches of the Government, who have highly commended the outstanding service of the railroads. Wide public recognition of the importance of the railroads in the prosecution of the war and of the efficiency with which they have performed their service is also apparent.

Your Company, as one of the great rail carriers of the country, had an important part in this transportation job. It carried more passengers and moved more freight more miles in 1943 than ever before. Further expansion of the nation's tremendous industrial production for war was chiefly responsible for this record-breaking traffic. The continued diversion to the rails of traffic normally moved over highways and waterways contributed to the load. The growth of the armed services still further increased the transportation requirements for troop movements and furlough travel.

As a result of the unprecedented volume of traffic created by the war, the operating revenues of the Company in 1943 were greater than in any previous year. Despite heavier costs, the record volume of traffic enabled the Company to earn a net income of $62,734,050, equal to $9.73 a share. Other factors contributing to this result were operating efficiency and lower fixed charges resulting from the Company's policy of debt retirement.

As of December 27, 1943, the United States assumed possession and control of the railroads of the country to prevent interruption of transportation service. Such possession and control were relinquished as of midnight, January 18, 1944, and mutual releases were exchanged between the Government and the Company.

Operating Results

Total operating revenues increased 18.9% over 1942, the increase in passenger revenue being 44.3% and in freight revenue 12.2%.

The volume of freight moved, as measured by the number of tons moved one mile, reached a new peak and was 11% larger than in 1942. The revenue per ton mile was 8.75 mills, the lowest since 1919 except in 1942 when it was 8.65 mills.

Passenger traffic, as measured by the number of revenue passengers carried one mile, the heaviest on record, increased 56% above 1942. Revenue per passenger mile averaged 1.905 cents, compared with 2.058 cents in 1942. The movement of armed forces in active military service continued to contribute largely to the increased volume of passenger traffic, as did travel at reduced fares by members of the armed forces on furlough.

Railway operating expenses (before taxes, other deductions and fixed charges) increased over the previous year by $74,667,501, or 18.5%, reflecting the greater volume of business as well as increased rates of pay, higher costs of fuel and other materials and supplies, and larger accruals for depreciation and amortization.

Railway operating ratio was 67.60, the lowest since 1916 and slightly lower than in 1942, when it was 67.83.

Taxes

There was an increase, compared with 1942, of 47.2% in railway tax accruals, the total of which absorbed more than seventeen cents of every dollar of operating revenues, was equivalent to $18.93 per share of stock, and included $78,437,781 for United States and Canadian income and excess profits taxes, or $12.16 per share.

Research and Post-War Planning

Substantial progress has been made by the Research Council, organization of which was mentioned in the 1942 Annual Report. The principal basic data relating to competitive transport in New York Central territory—motor, water, pipe line and air—have been assembled, complementing similar nation-wide studies of the Association of American Railroads. The future development of the Company's passenger service to meet post-war competitive conditions has had most intensive study. A long-range survey of motive power and its development is well under way. Research committees have been cooperating with regional and divisional officers in seeking to develop further efficiency in operating practices. Studies of traffic, accounting, and personnel are proceeding concurrently, to the end that the Company may be adequately prepared for the competitive period anticipated.

Earned Surplus Account

BALANCE TO CREDIT OF EARNED SURPLUS—JANUARY 1, 1943		$201,606,205
ADDITIONS:		
Net Income for the Year 1943	$62,734,050	
Sundry Items	793,559	63,527,609
		$265,133,814
DEDUCTIONS:		
Dividend Appropriations of Surplus	$9,671,091	
Surplus Appropriated for Investment in Physical Property	123,736	
Retirement of Road Property	439,306	
Loss on Sale of Property in New York City	472,335	
Sundry Items	940,418	11,646,886
BALANCE TO CREDIT OF EARNED SURPLUS DECEMBER 31, 1943		$253,486,928

Income Account

	1943	1942
RAILWAY OPERATING REVENUES:		
Freight	$480,665,605	$428,254,134
Passenger	162,017,837	112,259,031
Mail	12,908,893	11,999,746
Express	13,778,434	11,132,496
All Other	36,754,064	30,020,689
Total	$706,124,833	$593,666,096
RAILWAY OPERATING EXPENSES:		
Maintenance of Way and Structures (Note A)	$89,735,382	$68,547,071
Maintenance of Equipment (Note B)	120,590,944	109,096,315
Traffic	7,987,109	7,143,584
Transportation	234,558,397	197,544,216
General and All Other	24,465,267	20,338,412
Total	$477,337,099	$402,669,598
NET REVENUE FROM RAILWAY OPERATIONS	$228,787,734	$190,996,498
Operating Ratio	67.60	67.83
Tax Accruals	122,035,845	82,890,104
Net Debits for Equipment and Joint Facility Rents	18,227,592	17,706,899
NET RAILWAY OPERATING INCOME	$88,524,297	$90,399,495
Other Income:		
Miscellaneous Rent Income	$4,254,857	$3,349,927
Separately Operated Properties	1,821,325	2,216,517
Dividend Income (Note C)	5,335,004	6,919,987
Income from Funded Securities (Note C)	4,191,012	4,109,322
Miscellaneous	5,531,508	1,682,837
Total	$21,133,706	$18,278,590
TOTAL INCOME	$109,658,003	$108,678,085
Miscellanecus Deductions from Income	1,587,495	11,082,453
Income Available for Fixed Charges	$108,070,508	$97,595,632
Fixed Charges:		
Rent for Leased Roads and Equipment (Note C)	$21,095,814	$22,392,182
Interest on Funded Debt	23,563,322	24,533,511
Interest on Unfunded Debt	672,121	1,587,756
Amortization of Discount on Funded Debt	5,201	.....
Total	$45,336,458	$48,513,449
NET INCOME TRANSFERRED TO EARNED SURPLUS	$62,734,050	$49,082,183
Note A—Includes amortization and depreciation on roadway property	$8,965,011	$8,842,087
Note B—Includes amortization and depreciation of equipment	$28,193,575	$24,476,159
Also includes depreciation of power-plant machinery	$866,044	$805,344
Note C—Included in other income and rent for leased roads are certain inter-company transactions representing credits and corresponding debits amounting to	$3,092,960	$3,979,537
Other income also includes items representing interest and dividends amounting to received on securities of and advances to terminal and other railroad companies whose properties are jointly used by this Company, as to the major portion of which a like amount was paid to those companies as rental and included in joint facility rents.	$1,461,431	$1,492,940

F. E. WILLIAMSON,
President

to accelerate the operation of switch engines at this point, which handle more than 3,000 cars daily in making up trains. This is the first stage in the Rock Island's program of micro-wave (very high frequency) radio communication in connection with the operation of trains.

To date, two Diesel switchers have been equipped with transmitting and receiving units in the 30-40 megacycle band of frequencies. These units have loud speakers and telephone sets, with the loud speaker and telephone installed immediately in front of the engineer in the cabs of the Diesel switch engines. The transmitting and receiving units are mounted on the floor below the window behind the engineer's seat.

The master control station, through which messages are relayed to and from the yardmaster and engineers, is located in the middle of the yard at the base of a 90-foot light tower, upon which the antenna is mounted. Loudspeakers and telephones are located in both the outgoing and incoming yardmasters' offices. These are connected to the master control station by conventional telephone circuits. This communication system, which operates on the frequency-modulation principle to eliminate noise and interference, has a range of 30 miles.

Permits were granted the Rock Island on May 30 by the Federal Communications Commission for two-way radio communication in yards, between the front and rear ends of trains, between dispatchers and cabooses or engines, and between brakemen and flagmen and trains.

The Rock Island plans further research on the immediate development of end-to-end of trains micro-wave intercommunication, and direct communication between dispatchers and trains. Other research is planned later on safety devices. An electronic research laboratory is being set up in part of a new freight house recently constructed at Blue Island, and will be completed as soon as equipment can be secured.

At the ceremonies inaugurating the new station at Burr Oak yard, J. D. Farrington, chief executive officer, stated that, "This radio installation is the beginning, and as equipment for other uses becomes available, we plan to employ radio extensively as a vital part of our communications system over the entire railroad."

B.I.R. Would Relax Trucker Restrictions

(*Continued from page 1125*)

ment through congested areas shall be eliminated from all certificates and permits.

3. Authorizations which prevent common and contract carriers from rendering service to and from all points within their authorized territories and points through which their vehicles pass in serving presently authorized territories shall be abolished.

4. Restrictions upon the type of service rendered shall be limited to those necessary to confine carriers to common or contract carriage, except where rendition of both types is consistent with the public interest.

The report asserts that the commission's emergency powers, which expire on December 31, give it "adequate power to prevent wasteful transportation attributable to operating authority restrictions." But the commission, according to the report, has used its emergency power to approve temporary cessation of trucking operations rather than to suspend regulatory restrictions upon carriers continuing to operate. More than 700 such authorizations were granted from March 1942 through October 1943, it is found. Other than the authorization of a short route through Canada between Buffalo, N. Y., and Detroit, Mich., the report continues, "the only use made of this power to obtain more economical operations has been the granting of permission to regular-route common carriers to use direct instead of circuitous specified routes (1) in the movement of empty trucks and (2) in the movement of loaded trucks when the specified route is less than 10 per cent longer than the shortest available route."

The report further asserts that "though the commission has permitted many carriers to meet emergency service needs, a reasonable conclusion is that it has not made extensive use of its war powers to remove restrictions which necessitate empty mileage and idle equipment." It adds that in making provision for necessary service adjustments the commission's policy has been to preserve pre-war regulatory arrangements.

Thus "it seems probable that neither the limited relaxation of regulatory restrictions by the commission nor the leasing program of the O.D.T. has eliminated the greater part of the waste mileage occasioned by certificate and permit restrictions."

In connection with a representative sample of 1,607 intercity freight carriers assembled by the board it was disclosed that most intercity motor-freight carriers in interstate commerce have been restricted with respect to the commodities they may haul—62 per cent of them to special rather than general commodities. Approximately 98 per cent of the general commodity carriers have been restricted by a list of exceptions which usually included high-value articles, explosives, bulk commodities, household goods, commodities requiring special equipment, and commodities injurious to other lading. About 54 per cent of the common carriers, according to the report, have been restricted to special commodities, and, "as might be expected from the limited number of shippers served by contract carriers, nearly 96 per cent of this group has been limited to specified commodities."

Federal control of domestic water trans-

* * * *

All-Feminine Dining Car Crew on C. N. R.

This all-woman crew—waitress, buffet-cook and pantry girl—on the Canadian National's day run between Halifax and Sydney, N. S., represents the first attempt in Canada to utilize women in dining car service. The C. N. R. is experimenting similarly on its run between Moncton and Saint John N. B., but so far has hired only waitresses and a pantry girl, with the rest of the crew being male.

port since 1940, according to the report, has resulted in similar but much less restrictive operating conditions than in the motor-carrier field."

Restrict Holding "Reefer" Egg Shipments for Billing

Upon request of the Interstate Commerce Commission and the Office of Defense Transportation, the Association of American Railroads' Car Service Division has advised railroads not to place refrigerator cars for loading with fresh eggs except upon written car order containing assurance of billing within 24 hrs. after loading is completed. When billing of such cars is not completed within the specified time, all roads are advised not to supply additional empty refrigerator cars for loading until all such cars being held have been billed.

Settlement of Southern Diesel Case—a Correction

The news item reporting the settlement by Southeastern railroads of the so-called Diesel manning and wage case, which appeared in the *Railway Age* of May 20, page 1002, stated erroneously that the settlement came out of mediation proceedings instituted by the National Mediation Board.

Actually, the settlement was an agreement reached independently of N.M.B. mediation by the railroad and union representatives. The Mediation Board had been in the case at one stage, when its services were invoked by the carriers; but its efforts failed to bring the parties together, and there was a reversion to direct negotiations before the final settlement came.

Supply Trade

W. H. Miner, Inc., Celebrates Fiftieth Anniversary

A dinner commemorating the fiftieth anniversary of the founding of W. H. Miner, Inc., was held at the Union League Club, Chicago, on June 7. Participating in the celebration were Mrs. William H. Miner, chairman of the board, President A. P. Withall, Vice-President G. A. Johnson and 80 members of the company, 27 of whom have been associated with it for 25 years or more.

The first patent covering a tandem spring draft rigging was issued to William H. Miner in 1891 and 2½ million car sets of this gear were installed up to the time that friction draft gears were developed to meet the demands of heavier modern railway service. From 1906 to date, about 2½ million car sets of Miner friction gears have been supplied for railway use.

Miner products, including certified draft gears and hand brakes, truck spring snubbers, side bearings, car door fasteners and safety locking pins, are now manufactured at four plants, located at Buffalo, N. Y., Benton Harbor, Mich., Brantford, Ont., and Montreal, Que. This company has been a pioneer in draft gear research, establishing its first testing laboratory in 1909 and extending these facilities until at the present time it has six drop hammers of 9,000 and 27,000 lb. designs, three of which are located at the plant at Buffalo, N. Y., two at the Chicago research laboratory and one at Montreal, for use in checking the capacities of draft gears manufactured in Canada.

C. B. Pooler has been appointed vice-president in charge of manufacturing of the **Philip Carey Manufacturing Company,** Cincinnati, Ohio.

Fred K. Murphy, formerly superintendent of equipment for the Cleveland, Cincinnati, Chicago & St. Louis, has been appointed vice-president of the **Hanna Stoker Company** at Cincinnati, Ohio.

The **Fansteel Metallurgical Corporation** and the **Tantalum Defense Corporation** of North Chicago have been awarded their second Army-Navy "E" for continued production excellence.

Frank K. Metzger has been elected vice-president in charge of sales of the **Baldwin Locomotive Works.** Mr. Metzger first became associated with Baldwin in 1909

Frank K. Metzger

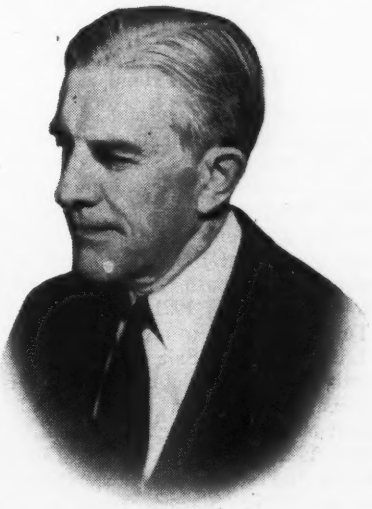
when he was employed by the Standard Steel Works Company, a wholly-owned subsidiary. He was appointed successively sales manager, vice-president in charge of sales, and, in 1930, vice-president and general manager in charge of operations and sales of the Standard Steel Works. Shortly after Standard Steel became a division of the parent company, he was elected divisional vice-president of Baldwin in charge of that division.

J. A. Sauer, executive vice-president of the **Symington-Gould Corporation,** has been elected president to succeed **Charles J. Symington,** who becomes chairman of the board. Mr. Symington will continue to direct the general policies of the company with offices in New York as heretofore. Mr. Sauer began his career as an office boy and stenographer in the Baltimore, Md., office of the original T. H. Symington & Co. 35 years ago and has been with the company continuously since that time. He will make his headquarters at Rochester, N. Y., during the present emergency, or as long as may be desirable in view of the critical labor shortage in the company's plants at Rochester and Depew, N. Y.

Mr. Symington was graduated from Amherst College. He began his career as an

J. A. Sauer

apprentice with the West Virginia Pulp & Paper Co. in 1902 and was appointed assistant manager of the Sayre, Pa., Stamping Company in 1903 and manager of the Cayuta Manufacturing Company of Sayre in 1905. He served as assistant manager of T. H. Symington & Co. at Baltimore, Md., from 1907 to 1911, as general sales agent for the company at Chicago in 1911-12, and as vice-president in charge of sales with headquarters in New York from 1912 to 1919. He was elected president of the Symington-Gould Corporation in 1919. The Symington-Gould Corporation has had unusual success in securing the co-operation of



Charles J. Symington

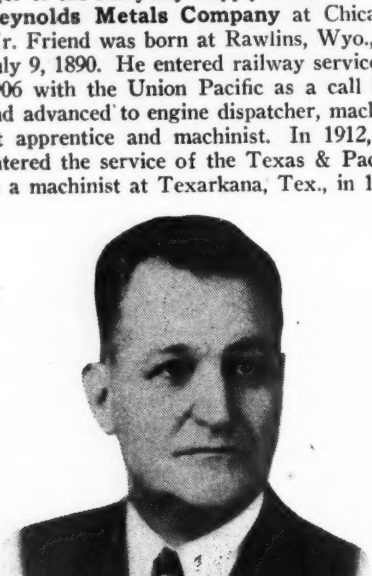
its employees in the war production drive and in reducing absenteeism.

John D. Tyson has been elected divisional vice-president in charge of the Standard Steel Works Division. Mr. Tyson has been a member of the Standard Steel Works

staff since 1923 when he joined the metallurgical department upon completion of his studies at Pennsylvania State College. He subsequently was appointed assistant metallurgical engineer, chief metallurgist in 1931, and manager of sales and metallurgy in 1943.

R. C. Geekie, sales representative of the **Scullin Steel Company,** St. Louis, Mo., since 1936, has been appointed assistant to the president in charge of sales to assume the duties of the late G. L. L. Davis, former vice-president in charge of sales.

James E. Friend, deputy associate director of the Mechanical section of the Division of Railway Transport of the Office of Defense Transportation, with headquarters at Chicago, has been appointed sales manager of the Railway Supply division of the **Reynolds Metals Company** at Chicago. Mr. Friend was born at Rawlins, Wyo., on July 9, 1890. He entered railway service in 1906 with the Union Pacific as a call boy and advanced to engine dispatcher, machinist apprentice and machinist. In 1912, he entered the service of the Texas & Pacific as a machinist at Texarkana, Tex., in 1915



James E. Friend

was promoted to foreman and in 1916 was made general foreman at Toyah, Tex., and Baird. In May, 1918, he entered military service and served as a first lieutenant with the 50th Engineers overseas, returning to the Texas & Pacific in August, 1919, as general foreman at Baird, Tex., and being transferred to El Paso, Tex., in December, 1919. In September, 1921, Mr. Friend left the Texas & Pacific to accept service with the Los Angeles & Salt Lake as general foreman at Milford, Utah, and returned to the Texas & Pacific in January, 1922, as assistant master mechanic at Marshall, Tex. In July, 1922, he was promoted to master mechanic and served at Alexandria, La., Shreveport, Big Spring, Tex., and Ft. Worth. In October, 1942, Mr. Friend was granted a furlough from the Texas & Pacific to serve as deputy associate director in the Mechanical section of the Office of Defense Transportation at Washington, D. C., and in January, 1943, he opened an office in Chicago to supervise the activities of the Mechanical section of the Division of Railway Transport in the Western region.

A. G. Dohm and **L. F. Duffy,** formerly vice-presidents of the Camel Sales Company, (wholly owned subsidiary of the Youngstown Steel Door Company), have been elected vice-presidents of the **Youngstown Steel Door Company,** with headquarters at Chicago. **J. D. Ryan,** formerly with the Ryan Car Company, has become associated with the sales department of the Youngstown Steel Door Company. **E. C. Browne,** assistant vice-president of the **Camel Sales Company,** has been elected vice-president of that company, with headquarters as before at Chicago, and **L. C. Voss,** assistant vice-president, has been elected assistant to the president.

J. J. Smith, supervisor of shops for the Baltimore & Ohio for the past fifteen years, has been appointed general superintendent of the Schenectady, N. Y., plant of the **American Locomotive Company.** Mr. Smith joined the B. & O. as machinist at Connellsville, Pa., in 1911, and subsequently was appointed assistant foreman, general foreman, shop inspector, and supervisor of shops.

T. C. Davis, vice-president in charge of mechanical sales planning and experimental sales of the Dayton Rubber Manufacturing Company, has been appointed a member of the executive committee of the **Rubber Manufacturing Association.**

Charles J. Hardy, chairman of the board of the **American Car & Foundry Co.,** was awarded the honorary degree of Doctor of Laws by De Paul University on June 7. Mr. Hardy was graduated from the Columbia University Law School and was general counsel for the American Car & Foundry Co. for 25 years prior to his election as president in March, 1933.

OBITUARY

John W. Robb, vice-president and treasurer of the a.c.f. Motors Company, died

John W. Robb

June 5. He was 64 years of age. Mr. Robb was graduated from Cornell University in 1903. He joined the a.c.f. Motors Company in 1927, shortly after its organization, and had been treasurer of the company for a number of years when he was elected a vice-president in 1937.

George E. Scott, manufacturers' agent at St. Louis, Mo., died suddenly in that city on June 1. Mr. Scott was purchasing agent of the Missouri-Kansas-Texas from 1914 to 1939, and vice-president and assistant sales manager of the Scullin Steel Company from the latter date until May 15 of this year, when he resigned to become a manufacturers' agent.

Mr. Scott was chairman of the Purchases and Stores division of the Association of American Railroads from 1932 to 1935.

David T. Hallberg, assistant to the president of the P. & M. Company, Chicago, whose death on May 27 was reported in the *Railway Age* of June 3, was born in Ottumwa, Iowa, on September 11, 1885, and after completing a public school education in that city, entered the printing business in Chicago. Leaving this employment in 1905, he entered the passenger and advertising department of the Atchison, Topeka & Santa Fe and later was appointed Western representative of the Santa Fe employees magazine. He held that position until 1910 when he entered the service of

David T. Hallberg

the P. & M. Company as a material inspector. Shortly thereafter, he became Western representative of the company and in January, 1918, he was appointed sales representative at Chicago. In June, 1918, he was promoted to district sales agent and on January 1, 1922, to assistant general sales agent. Shortly thereafter, he was promoted to general sales manager and on May 1, 1931, to assistant to the president, which position he was holding at the time of his death.

REPRESENTATIVES of the Baltimore & Ohio filled 123 speaking engagements in 1943, according to the B. & O. Employees' magazine. These dates were arranged by the railroad's public relations department through the Eastern Presidents' Conference. Most addresses were before civic groups—Lions, Rotary and Kiwanis Clubs and Chambers of Commerce. Speakers included railroad superintendents, division freight agents, traveling freight agents, assistant engineer, coal traffic manager, research librarian, assistant superintendent of car department, rules examiner and division operator and public relations men.

Construction

CANADIAN NATIONAL.—Contract for the ore dock at Port Arthur, Ont., which the Canadian National is building, acting as agents for the government, has been awarded to Tomlinson Brothers, Ltd., of Toronto. The contract covers the ore dock, the approach trestle and the grading for the approach. The contract for pile driving was awarded to Thunder Bay Harbour Improvements, Ltd., of Port Arthur.

The new ore dock is being built to handle iron ore from the Steep Rock mines. The ore will be loaded into railway cars at the mine and carried to Port Arthur where the cars will discharge by gravity into the pockets of the ore dock and from the ore dock to boats. The ore dock structure, which will be built on the new two-tiled wharf in Port Arthur, will be of reinforced concrete with 50 ore pockets on each side—each pocket having a nominal capacity of 300 tons of iron ore. In order to elevate the cars to the top of the dock structure, a long approach on a comparatively steep grade will be built, consisting chiefly of timber trestle with some structural steel where the approach crosses ground-level tracks and streets.

CHESAPEAKE & OHIO.—At this company's request, Division 4 of the Interstate Commerce Commission has dismissed without prejudice its application for authority to construct a 2.8-mile extension of its proposed Hominy creek branch in Greenbrier County, W. Va.

CHICAGO, ROCK ISLAND & PACIFIC.—This road has awarded four contracts in connection with the proposed change of line and grade reduction on 23 miles of the main line between Eldon, Iowa, and Perlee, which is to be completed in the latter part of this year at a total cost of $2,450,000, as reported in the *Railway Age* of April 8. Two contracts for the necessary grading work have been awarded to the Condon-Cunningham Company, and the Peter Kiewit Sons Company, both of Omaha, Neb., and two contracts covering the construction of bridges and culverts have been awarded to the Alexander Repass Company, Des Moines, Iowa, and to the Condon-Cunningham Company.

ERIE.—This road has started a construction and improvement program which will aggregate $1,340,000, and will include the following projects: Improvement for stream control of Jennings Creek near Addison, N. Y.; install centralized traffic control on the River Line between Cuba Junction, N. Y., and River Junction; make track and signal changes at Campbell Hall, N. Y.; build engine house, sanding, fueling and track facilities required in connection with the operation of Diesel locomotives at Marion, Ohio; make alterations to the 29th Street freight station at New York; renew 323 ft. of bulkhead on the Cuyahoga river at Cleveland, Ohio; extend passing siding, install remote control and other improvements at Transfer, Pa., and Dymatuning; respace signals between Meadville, Pa., and Kent, Ohio, on the Mahoning division and respace signals between Kent, Ohio, and Marion, on the Kent division; extend passing sidings and install remote control for passing sidings at Polk, Ohio; construct westward passing siding at Polk; extend passing sidings at Sterling, Ohio; install a No. 16 crossover and other work, jointly with the Cleveland, Cincinnati, Chicago & St. Louis at Marion, and install interlocking plant at Ohio City, Ohio.

ERIE.—This road has awarded contracts for the construction of new Diesel servicing, maintenance and repair facilities at Marion, Ohio, which will involve a total expenditure of approximately $450,000. These facilities will include a combination maintenance and repair shop, approximately 220 ft. by 110 ft., with cleaning and reconditioning bays; an outside servicing platform for fueling locomotives from a 10,000-gal. fuel oil storage station; a half-ton per hour, semi-automatic sanding plant with 15,000 cu. ft. wet sand storage, and a locomotive washing plant. The new shop, which will be of steel frame construction, will have concrete foundations and floors, brick and glass block exterior walls, two inspection and repair pits, and a 60-ton truck drop table.

Other features of the shop will include locomotive floor-level working platforms throughout the light maintenance section, a central lube oil storge and distribution plant, a distilled water plant for replenishing Diesel engine cooling water supplies, and a 25-ton overhead traveling crane in the heavy repair section. A contract for the entire facilities, exclusive of the sanding plant, has been awarded the Hunkin-Conkey Construction Company, Cleveland, Ohio. The contract for the sanding plant has been awarded the Ross & White Co., Chicago. Construction will start immediately.

ILLINOIS CENTRAL.—This road and its subsidiary, the Chicago, St. Louis & New Orleans, have applied to the Interstate Commerce Commission for authority to operate and to construct, respectively, a branch extending 4.6 miles easterly from a point near Greenville, Ky., into an undeveloped coal mining area.

PERE MARQUETTE.—This road has awarded a contract, amounting to $150,000, to the Jutton-Kelly Company, Detroit, Mich., for the construction of an extension of a steel sheet piling revetment wall, south of St. Joseph, Mich.

PERE MARQUETTE.—This road has awarded a contract to the American Bridge Company for the construction of the superstructure of a new bridge over the Saginaw river at Saginaw, Mich., and a contract to the Merritt-Chapman & Scott Corp., for the sub-structure, the two contracts amounting to $884,000. The center line of the new bridge will be 37 ft. north of the center line of the old structure which will be demolished when the new bridge is completed. The work will involve extensive track and signal changes and other improvements which will be undertaken by company forces.

Equipment and Supplies

LOCOMOTIVES

The NEW YORK CENTRAL has four 6000-hp. Diesel-electric locomotives on order with the Electro-Motive division of the General Motors Corporation.

The CANADIAN PACIFIC has received delivery of the first of 92 locomotives included in its 1944 equipment program. The new freight locomotive, of the Mikado type, was delivered by the Montreal Locomotive Works, which has a contract for 24 more of the same type. The Canadian Locomotive Company is building 45 Pacific-type locomotives for the railroad, the first of which are scheduled for delivery next month, and the American Locomotive Company ten 1000-hp. Diesel-electric switchers. In addition, the Canadian Pacific is adding two other engines built to company design at its Angus Shops, in developing a new class for post-war replacement of older locomotives.

FREIGHT CARS

The FLORIDA EAST COAST has ordered 50 box cars of 50 tons' capacity for express passenger-train service from the Magor Car Corporation. These are in addition to the 50 50-ton box cars previously ordered by the railroad from Magor and reported in the *Railway Age* of May 6.

PASSENGER CARS

The NEW YORK, CHICAGO & ST. LOUIS is inquiring for five express-baggage cars.

The UNITED STATES ARMY has placed an order for 100 hospital cars with the American Car & Foundry Co.

SIGNALING

The CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS has ordered two Model-31 electro-pneumatic car retarders, totaling 187 rail feet of retardation, from the Union Switch & Signal Co. for installation in the westbound Sharonville classification yard, Cincinnati, Ohio.

The ST. LOUIS SOUTHWESTERN has placed an order with the Union Switch & Signal Co. for the signal material necessary to install centralized traffic control between Fordyce, Ark., and Lewisville, a distance of 84 miles, with the system controlled by a style-C code machine located at Pine Bluff, Ark., about 42 miles east of Fordyce. Involved in the order are style H-2 searchlight signals, M-2 low-voltage electric switch layouts, style SL-6 electric switch locks with telephones, style U-5 switch circuit controllers, relays and housings. The field installation work will be carried out by the railway company's regular signal construction forces.

Financial

AKRON, CANTON & YOUNGSTOWN.—*Annual Report.*—The 1943 annual statement of this road shows a net income, after interest and other charges, of $611,374, as compared with a net income of $338,718 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	171.31	.....
RAILWAY OPERATING REVENUES	$4,500,270	+$1,026,854
Maintenance of way and structures	691,556	+54,664
Maintenance of equipment	417,720	+63,498
Transportation	1,216,996	+228,790
TOTAL OPERATING EXPENSES	2,706,338	+400,631
Operating ratio	60.14	−6.24
NET REVENUE FROM OPERATIONS	1,793,932	+626,222
Railway tax accruals	639,761	+286,663
NET RAILWAY OPERATING INCOME	975,585	+330,775
TOTAL INCOME	1,050,182	+351,062
Rent for leased equipment	64,525	+11,638
Interest on funded debt	325,985	−3,940
TOTAL DEDUCTIONS FROM TOTAL INCOME	438,808	+12,344
NET INCOME	611,374	+338,718

DALLAS RAILWAY & TERMINAL.—*Mortgage Bonds Offered.*—On June 7, an underwriting group headed by Kidder, Peabody & Co. offered for sale to the public $3,000,000 of Dallas Railway & Terminal first mortgage serial bonds at prices to yield from 1.50 to 3.85 per cent. The bonds mature $200,000 annually from June 1, 1945, to 1959. Proceeds from the sale together with treasury funds will be used to redeem the company's outstanding $3,566,700 first mortgage gold bonds, 6 per cent series, due 1951.

DELAWARE & HUDSON.—*Rensselaer & Saratoga Merger.*—These two companies have agreed to merge as of May 1, 1944, on the basis of an exchange of $8,729,200 of Rensselaer & Saratoga general mortgage bonds, to be assumed by the Delaware & Hudson, for the publicly held 87,292 shares of 8 per cent stock of the R. & S. The bonds are to bear an interest rate of 4.7 per cent for 24 months and subsequently 5½ per cent, the purpose of the reduced interest being to absorb unpaid federal income taxes of the Rensselaer. The financing provides for a 150,000 annual sinking fund applicable to the retirement of R. & S. first mortgage bonds due April 1, 1961, of which $1,874,000 are outstanding in hands of the public, and, after the retirement of these bonds, for a $100,000 annual sinking fund for the retirement of the general mortgage bonds. The merger is subject to the approval of Rensselaer & Saratoga stockholders and the Interstate Commerce Commission. Of the 100,000 shares of Rensselaer stock outstanding, the Delaware & Hudson owns 12,708, which would be cancelled. Purpose of the plan is to solve the federal income tax question respecting leased line rental payments.

DENVER & SALT LAKE.—*Annual Report.*—The 1943 annual report for this road shows a net income, after interest and other charges, of $4,106, as compared with a net income of $83,910 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	232.15	.....
RAILWAY OPERATING REVENUES	$2,801,612	−$79,147
Maintenance of way and structures	559,354	+214,206
Maintenance of equipment	647.647	+96,919
Transportation	954,437	+38,857
TOTAL OPERATING EXPENSES	2,323,957	+364,550
NET REVENUE FROM OPERATIONS	477,655	−443,696
Railway tax accruals	368,582	+30,274
NET RAILWAY OPERATING INCOME	630,665	−568,681
TOTAL OPERATING AND OTHER INCOME	642,945	−569,615
Interest, Rents and Miscellaneous	638,839	−489,811
NET INCOME TRANSFERRED TO PROFIT AND LOSS	4,106	−79,804

DULUTH, SOUTH SHORE & ATLANTIC.—*Annual Report.*—The 1943 annual report of this road shows a net income, after interest and other charges, of $132,084, as compared with a net income of $60,833 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	550.63	+.82
RAILWAY OPERATING REVENUES	$4,352,096	+$121,407
Maintenance of way and structures	750,182	+48,435
Maintenance of equipment	611.009	+107
Transportation	1,512,775	+35,704
TOTAL OPERATING EXPENSES	3,054,511	+82,443
Operating ratio	70.18	−.07
NET REVENUE FROM OPERATIONS	1,297,585	+38,964
Railway tax accruals	244,939	+20,100
RAILWAY OPERATING INCOME	1,052,646	+18,864
Net rents—Dr.	51,902	−34,911
NET RAILWAY OPERATING INCOME	1,000,744	+53,775
Total other income	31,545	+12,256
TOTAL INCOME	1,032,289	+66,031
Interest on funded debt	895,465	−5,116
TOTAL FIXED CHARGES	895,571	−7,798
NET INCOME	132,084	+71,251

ILLINOIS CENTRAL. — *Modification of Lease.*—Division 4 of the Interstate Commerce Commission has approved a modification of the terms of the lease under which this company operates the Dubuque & Sioux City to give effect to the commission's current depreciation accounting requirements.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—*Reorganization.*—This road's reorganization managers have applied to the Interstate Commerce Commission for authority to transfer the property of the debtor company undergoing reorganization to a new company, and for the new company to issue securities in connection with the reorganization as required by the plan approved by the commission.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE. — *Annual Report.* — The annual statement of this road shows a net deficit after interest and other charges, of $1,340,553, as compared with a net deficit of $2,633,595 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared with 1942
Average Mileage Operated	3,219.08	−.1
RAILWAY OPERATING REVENUES	$26,444,158	+$3,726,13
Maintenance of way and structures	4,579,550	+879,25
Maintenance of equipment	4,379,242	+379,44
Transportation	9,360,110	+1,180,62
TOTAL OPERATING EXPENSES	19,628.107	+2,551,21
Operating ratio	74.22	−.9
NET REVENUE FROM OPERATIONS	6,816,051	+1,174,92
Railway tax accruals	1,815,912	+246,40
RAILWAY OPERATING INCOME	5,000,140	+928,52
Hire of equipment—Net Cr.	336,085	+237,02
Joint facility rents	428,578	+14,59
NET RAILWAY OPERATING INCOME	5,141,093	+1,156,55
Total other income	142,243	−12,27
TOTAL INCOME	5,283,336	+1,144,38
Rent for leased roads and equipment	1,440	.....
TOTAL DEDUCTIONS FROM GROSS INCOME	6,623,888	−148,65
NET DEFICIT	$1,340,553	−1,293,04

TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS.—*Acquisition.*—In connection with this company's proposal to acquire the capital stock of the St. Louis Bridge Co. and the Tunnel Railroad of St. Louis, Division 4 of the Interstate Commerce Commission has authorized it to issue $6,740,000 of certificates of deposit so that the plan of exchange may be submitted to the stockholders of those companies. The division has not taken any action with respect to the details of the plan or the issue of various securities in connection therewith.

WABASH - MISSOURI - KANSAS-TEXAS.—*Acquisition.*—The Wabash has applied to the Interstate Commerce Commission for authority to acquire for $2,400,000 the line of the Missouri-Kansas-Texas from Moberly, Mo., to Hannibal, about 67 miles now operated by it in freight service under lease.

First Quarter Dividends

Statistics compiled by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission indicate that during the first three months of this year the dividend appropriations of Class I railroads totaled $31,295,299, as compared with $28,995,351 in the same period of 19[illegible] and $24,407,896 in the comparable 19[illegible] quarter. The same tabulation shows that

News Department continued on next left-hand page

PERE MARQUETTE

adds 12 more

TO ITS FLEET OF 2-8-4 LIMAS

To handle its heavy fast freight traffic, especially between Chicago and Detroit, the Pere Marquette put fifteen 2-8-4 Lima Locomotives in operation in 1937, twelve additional ones in 1941, and has now added twelve more; making a fleet of 39 of this type placed in service in the last seven years.

Of the latest twelve, five are equipped with Locomotive Boosters. These have a main cylinder tractive power of 69,350 pounds and a total tractive power of 83,450 pounds. They have 26" x 34" cylinders and 69" drivers.

LIMA LOCOMOTIVE WORKS INCORPORATED

LIMA LOCOMOTIVE WORKS, INCORPORATED, LIMA, OHIO

federal income taxes amounted to $309,782,322 in the first three months of this year, as compared to $300,103,742 in the same 1942 period and $87,886,492 in the first 1942 quarter.

Dividend appropriations by individual roads are tabulated below, the list including all Class I roads that made such appropriations during the first quarter:

Railway	First quarter 1944	1943
Atch., Topeka & Santa Fe	$3,640,590	$3,640,590
Bangor & Aroostook	95,700	95,700
Cambria & Indiana	60,000	60,000
Chesapeake & Ohio	5,743,015	5,895,535
Chicago & East. Illinois	383,863	.....
Chicago Great Western	228,820	228,819
Cinc., New Orl. & T. P.	30,668	30,668
Detr. & Tol. Shore Line	60,000	60,000
Erie	2,017,029	1,969,062
Green Bay & Western	125,000	125,000
Illinois Terminal	125,000	.....
Lake Sup. & Ishpeming	107,100	.....
Lehigh & Hudson River	.....	70,605
Louisiana & Arkansas	75,000	75,000
Louisville & Nashville	2,340,000	2,340,000
Maine Central	.....	27,240
Norfolk & Western	3,516,208	3,516,208
Reading	1,049,496	1,049,496
Southern	2,596,400	2,596,400
Southern Pacific	1,886,382	.....
Union Pacific	5,325,227	5,325,227
Virginian	781,788	781,788
Wabash	598,186	598,186
Wheeling & Lake Erie	509,827	509,827

Average Prices Stocks and Bonds

	June 6	Last week	Last year
Average price of 20 representative railway stocks	40.37	41...	37.49
Average price of 20 representative railway bonds	88.72	89.33	77.87

Dividends Declared

Allegheny & Western.—$3.00, semi-annually, payable July 1 to holders of records June 20.

Beech Creek.—50¢, quarterly, payable July 1 to holders of record June 9.

Chicago South Shore & South Bend.—$1.00, semi-annually, payable June 12 to holders of record May 27.

New York & Harlem.—Common and preferred, $2.50, semi-annually, payable July 1 to holders of record June 16.

Pittsburgh, Fort Wayne & Chicago.—Common, $1.75, quarterly, payable July 1 to holders of record June 10.

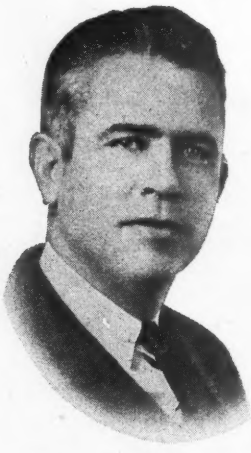
Railway Officers

EXECUTIVE

W. D. Faucette, chief engineer of the Seaboard Air Line, has been promoted to the position of executive representative, reporting to the receivers. Mr. Faucette's duties will include the handling of matters with the federal authorities, and with various authorities in the states through which the Seaboard operates, in addition to any other matters that may be referred to him by the receivers.

G. J. Willingham, superintendent of the Illinois division of the Illinois Central, with headquarters at Champaign, Ill., has been advanced to assistant to the vice-president and general manager, with headquarters at Chicago, succeeding **Wayne A. Johnson,** whose promotion to assistant vice-president was reported in the *Railway Age* of April 8. **H. K. Buck** and **O. H. McFarlin,** trainmasters of the Memphis division, with headquarters at Memphis, Tenn., have been promoted respectively to superintendent of the Memphis terminal and the Memphis division, with the same headquarters, replacing **E. D. Holcomb,** who has been transferred to Champaign, relieving Mr. Willingham.

Mr. Willingham was born at Maxfield, Ky., on February 12, 1900, and attended col-



Gideon J. Willingham

lege for two years. He entered railway service on September 10, 1917, as a rodman of the Illinois Central at Fulton, Ky., and on September 8, 1922, was promoted to instrumentman at Carbondale, Ill. On November 1, 1923, he was appointed general foreman at East St. Louis, Ill., and six months later he was promoted to resident engineer at that point. On March 1, 1926, he was transferred to the Edgewood-Fulton cut-off and on May 1, 1928, he was appointed track supervisor, with headquarters at Bluford, Ill. Mr. Willingham was promoted to supervisor of trains and tracks at Metropolis, Ill., on August 15, 1930, and on April 1, 1937, he was advanced to trainmaster at Fulton, Ky. He was later transferred to Council Bluffs, Iowa, and Champaign. In June, 1941, he was promoted to the position he held at the time of his new appointment.

FINANCIAL, LEGAL AND ACCOUNTING

Charles W. A. Maloney, whose promotion to freight claim agent of the Union

Charles W. A. Maloney

Pacific, with headquarters at Portland, Ore., was reported in the *Railway Age* of May 13, was born at Hopkins, Minn., on September 9, 1887, and entered railway service on August 1, 1908, as a clerk of the Northern Pacific at Spokane, Wash. On December 9, 1909, he went with the Union Pacific as a claim clerk, with headquarters at Spokane, later serving as a freight claim investigator and traveling adjuster, with the same headquarters. In July, 1916, Mr. Maloney was promoted to chief clerk of the freight claim department, the position he held at the time of his new appointment.

Albert V. Tate, whose promotion to general claim agent of the Gulf, Colorado & Santa Fe (part of the Santa Fe System), with headquarters at Galveston, Tex., was reported in the *Railway Age* of May 27, was born in West Hartlepool, England, on October 16, 1887, and received his higher education at LaSalle Extension University, Chicago. He entered railway service with the Santa Fe in 1908 as a statistical clerk in the freight accounting department, later holding several minor positions until 1916, when he was promoted to chief clerk of the general claim agent of the G. C. & S. F., with headquarters at Galveston. On December 1, 1939, Mr. Tate was advanced to as-

Albert V. Tate

sistant general claim agent, with the same headquarters, the position he held at the time of his new appointment.

OPERATING

William M. Christel, assistant to the general superintendent of the Minneapolis, St. Paul & Sault Ste. Marie (Soo Line), with headquarters at Minneapolis, Minn., has been promoted to superintendent of transportation, with the same headquarters.

A. R. Davis has been appointed superintendent of fuel conservation and lubrication of the Missouri Pacific, with headquarters at St. Louis, Mo., succeeding **J. J. Freibolt,** who has been appointed road foreman of engines, with headquarters at Little Rock, Ark.

Edwin D. Jones, superintendent of the Minneapolis-Duluth division of the Minneapolis, St. Paul & Sault Ste. Marie (Soo Line), with headquarters at Superior, Wis., has been promoted to general superintendent, with headquarters at Minneapolis, Minn., succeeding **Charles L. Simpson,** whose death on May 24 was reported in the *Railway Age* of June 3. **Vern Elliott,** assistant division superintendent at Minneapolis, has been advanced to acting superintendent at Superior, replacing Mr. Jones.

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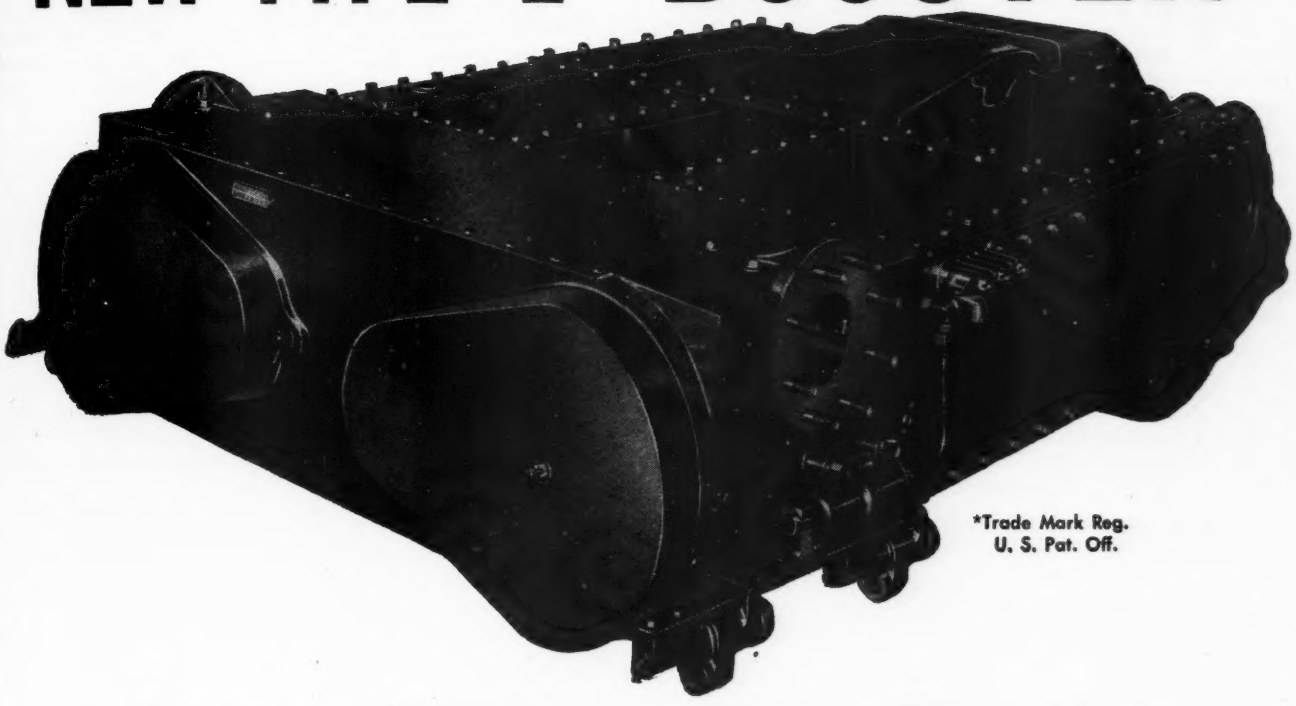
THE DESIGN OF THE NEW TYPE "E" BOOSTER*



*Trade Mark Reg.
U. S. Pat. Off.

Assures Maximum Steam Economy

IN developing the new Type "E" Booster to meet current conditions, many new factors in steam locomotive operation have been recognized, as well as the trend toward higher boiler pressures.

The short cut-off takes full advantage of the expansive properties of the steam and effects marked economies in steam consumption. The cast steel cylinders have integral inlet and exhaust manifolds. The large steam and exhaust passages give maximum inlet pressures and minimum back pressures. Furthermore, a new design of ball joint, with self adjusting packing and large passage areas, insures free flow of steam to and from the Booster.

Other outstanding features contribute to more powerful starting effort, smoother operation and higher operating speeds.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.
NEW YORK • CHICAGO
In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

George H. Nolan has been appointed acting assistant division superintendent, with headquarters at Ironwood, Mich., relieving **Philip Bryant,** who has been transferred to Minneapolis, succeeding Mr. Elliott.

B. J. Schilling, general agent, passenger department, of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago, has been promoted to special assistant to the superintendent of sleeping and dining cars, with the same headquarters, a newly-created position. **V. L. Hitzfeld,** assistant general agent, has been promoted to general agent, passenger department, with headquarters as before at Chicago, replacing Mr. Schilling.

R. H. Spicer, assistant superintendent of the Cedar Rapids division of the Chicago, Rock Island & Pacific, with headquarters at Inver Grove, Minn., has been promoted to superintendent of the Western division, with headquarters at Fairbury, Neb., succeeding **C. T. Rowley,** who has been transferred to the Oklahoma division, with headquarters at El Reno, Okla., replacing **W. E. Heimerdinger,** who has been transferred to the Rock Island division, with headquarters at Rock Island, Ill.

H. I. Walton, trainmaster of the St. Louis division, Baltimore & Ohio, has been named terminal superintendent at Philadelphia, Pa., succeeding **J. D. Warfield,** who has been appointed assistant superintendent of the Baltimore division at Baltimore, Md., replacing **T. J. Klauenberg.** Mr. Klauenberg becomes superintendent of the Wheeling, W. Va., division, with headquarters at that place, to succeed **R. A. J. Morrison,** who has been transferred to the Grafton, W. Va., division as superintendent.

John H. Cooper, whose promotion to general superintendent of the Northwestern division of the Pennsylvania, with headquarters at Chicago, was reported in the *Railway Age* of May 20, was born at Easton, Pa., on July 5, 1883, and was graduated from Lafayette College in 1905. He entered the service of the Pennsylvania on October 13, 1905, as a rodman on the Sunbury division and was transferred to the Williamsport division on March 9, 1910. On August 11 of that year he was advanced to transitman in the general office at Philadelphia and on January 1, 1911, became assistant track supervisor on the Tyrone division, being transferred successively to the Conemaugh, the Philadelphia and the Philadelphia Terminal divisions. He was advanced to track supervisor on the Trenton division on October 25, 1917, and was transferred to the New York division on March 1, 1920. Mr. Cooper was appointed division engineer of the Philadelphia division on November 1, 1923, and on January 1, 1926, he was transferred to the Monongahela division. On April 1 of the same year he was transferred to the Philadelphia Terminal division with headquarters at West Philadelphia, Pa. In July, 1927, Mr. Cooper was appointed engineer maintenance of way of the Southern division, and in December, 1927, he was advanced to superintendent of the Schuylkill division, with headquarters at Reading, Pa. On February 15, 1931, he was transferred to the Ft. Wayne division, remaining in that location until his new appointment.

TRAFFIC

A. P. Bibeault has been appointed district passenger agent of the Canadian National at Quebec City, Que., to succeed **J. E. LeBlanc,** who has retired.

E. A. Ryder has been appointed assistant to general freight traffic manager of the Canadian National with headquarters at Montreal, Que.

O. W. Hall, assistant to the general industrial agent of the Seaboard Air Line, has been appointed assistant general industrial agent, with headquarters at Norfolk, Va. His duties will involve promotion of industrial development throughout the territory served by that road.

Major Rupert P. Van Kirk, formerly traveling freight agent for the Ann Arbor, has been assigned to the office of Brigadier General Frank S. Ross, Chief of Transportation, European Theater of Operations. Major Van Kirk joined the military service two years ago and was on duty at the New York Port of Embarkation before going to Great Britain.

ENGINEERING & SIGNALING

G. H. Beasley, assistant engineer of the Louisville & Nashville, with headquarters at Louisville, Ky., has been promoted to principal assistant engineer, with the same headquarters, succeeding **George T. Tate.** Mr. Tate, whose retirement as principal assistant engineer of the Louisville & Nashville because of ill health was reported in the *Railway Age* of June 3, was born at Columbus, Ga., and was graduated in civil engineering from the Alabama Polytechnic Institute in 1910. He entered L. & N. service on September 9, 1910, as a rodman on construction and was later promoted to locating engineer and assistant resident engineer. During the first World War he served overseas with the 22nd Engineers of the U. S. Army, afterwards returning to the L. & N. On March 1, 1923, Mr. Tate was appointed office engineer for the chief engineer of construction, and on January 1, 1932, he was promoted to assistant engineer in the chief engineer's office. On March 1, 1941, he was advanced to the position he held at the time of his retirement. Gordon H. Beasley was born at Williamstown, Ky., on September 29, 1894, and was graduated from the University of Kentucky in January, 1919. He entered railway service in the same year as an instrumentman of the L. & N. at Ravenna, Ky., and in 1923 he was promoted to draftsman in the office of the chief engineer at Louisville. Two years later he was advanced to assistant engineer of the Eastern Kentucky division, with headquarters at Ravenna, and in 1937 he was promoted to division engineer of that division, with the same headquarters. On October 1, 1943, Mr. Beasley was appointed assistant engineer in the chief engineer's office, the position he held at the time of his new promotion.

Gordon H. Beasley

E. C. Shreve, division engineer of the Western Maryland's Elkins division, with headquarters at Cumberland, Md., has been promoted to the position of engineer, maintenance of way, at Hillen Station, Baltimore, Md., succeeding **W. A. Blackwell,** who has resigned. **W. B. Lee** succeeds Mr. Shreve as division engineer at Cumberland.

With the retirement of **J. L. Kirby,** chief engineer, maintenance of way, of the Seaboard Air Line, the engineering and maintenance of way departments of that road have been consolidated, and will be under the jurisdiction of the newly appointed chief engineer, **W. D. Simpson.** Mr. Simpson succeeds **W. D. Faucette,** whose promotion to the post of executive representative is reported elsewhere in these columns.

A. M. Schachtner, chief fire inspector of the Chicago & North Western, with headquarters at Chicago, has been promoted to insurance supervisor, with the same headquarters, succeeding **W. A. Goss,** who has resigned. **B. M. Whitehouse,** general bridge inspector at Chicago, has been advanced to chief fire inspector, relieving Mr. Schachtner, and **L. D. Garis,** assistant general bridge inspector, has been promoted to general bridge inspector, with headquarters as before at Chicago, replacing Mr. Whitehouse. **J. B. Lodeski,** assistant general bridge inspector, with headquarters at Chicago, has been appointed office engineer of the bridge department, with the same headquarters, succeeding **Walter L. Anderson,** who has been promoted to assistant general bridge inspector, relieving Mr. Garis. **H. H. Hall,** instrumentman of the Iowa division, has been advanced to assistant general bridge inspector at Chicago, replacing Mr. Lodeski.

PURCHASES AND STORES

Howard L. Beiter, tie and timber agent of the Lehigh & New England, has been appointed assistant general storekeeper of that road with headquarters at Pen Argyl, Pa. **J. S. Genther,** general storekeeper, has been named general storekeeper and assistant to general manager with offices at Pen Argyl and Bethlehem, Pa., respectively. Mr. Beiter, who was born at Wilmore, Pa., on July 1, 1894, entered railway service on August 1, 1916, at the Port Reading creosoting plant of the Reading. He joined the Lehigh & New England on February 16, 1928, as assistant tie and timber agent, being promoted to tie and timber agent on May 16, 1928. With his

News Department continued on next left-hand page

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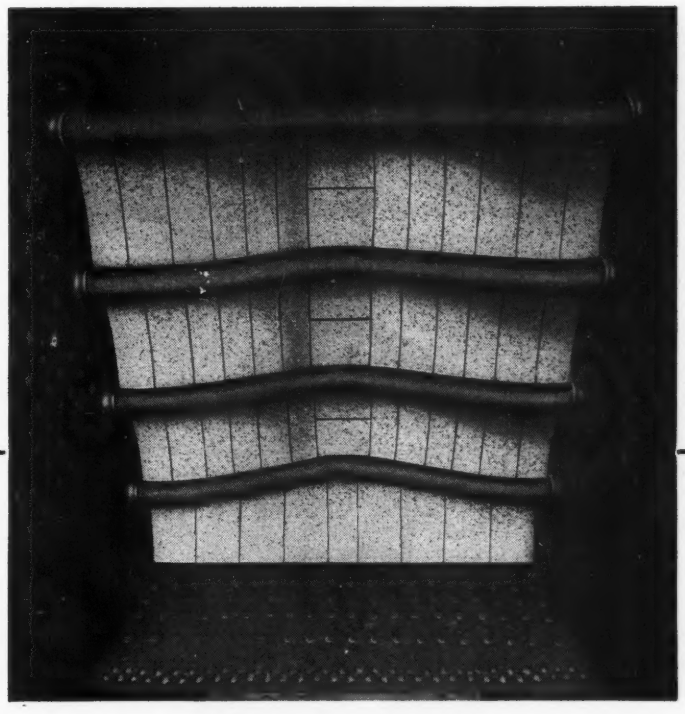

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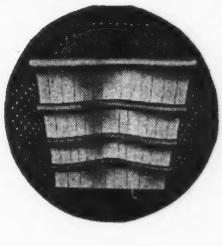

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recent appointment to the post of assistant general storekeeper at Pen Argyl, Mr. Beiter's former position has been abolished.

Walter Leroy Oswalt, whose appointment as general storekeeper of the Pennsylvania at Philadelphia, Pa., was announced in the *Railway Age* of June 3, was born at Topeka, Kan., on November 22, 1884. He entered the service of the Pennsylvania on March 2, 1903, as a machinist apprentice at the Altoona shops, and after serving as machinist and stockman, he was appointed assistant storekeeper in 1910. In May, 1916, Mr. Oswalt was named assistant material agent of the Eastern Pennsylvania division, and on May 1 of the next year he became assistant general foreman on the staff of the general superintendent of motive power. In May, 1919, under the regime of the United States Railroad Administration, Mr. Oswalt was transferred to the jurisdiction of the general storekeeper, and on March 1, 1920, at the conclusion of federal control, he was named works storekeeper. He then served successively as assistant general storekeeper and assistant works

Walter Leroy Oswalt

storekeeper at Altoona, and was again appointed works storekeeper on September 16, 1937. On June 1, 1943, Mr. Oswalt was advanced to assistant stores manager at Philadelphia, a position which he held until his present promotion to the post of general storekeeper, with the same headquarters.

MECHANICAL

Harry S. Rauch has retired as assistant master mechanic of the New York Central at Dewitt, N. Y., and the position has been abolished. **William G. Ringland** has been named master mechanic at that point with jurisdiction over the Dewitt and Syracuse, N. Y., territories, and the St. Lawrence division. **William R. Downs** has been appointed master mechanic at Avis, Pa.

George C. Vogel, whose appointment as superintendent of car department, Central of New Jersey, was announced in the *Railway Age* of June 3, was born at Buffalo, N. Y., on December 15, 1894. In June, 1910, he entered railroading as a messenger of the Lake Shore & Michigan at Buffalo, working in various clerical positions on that road for two years. He was then transferred to the transportation department of the Delaware, Lackawanna & Western, and thence to the mechanical department of the

George C. Vogel

Pennsylvania, where he served in many supervisory capacities over a period of approximately nine years. Prior to entering the service of the Central of New Jersey in 1927, Mr. Vogel went with the Boston & Maine as piece work supervisor in the mechanical department, later becoming assistant inspector of operations in the president's office. He joined the Central of New Jersey as general piece work supervisor of the mechanical department, and in March, 1929, was named foreman of the Elizabethport, N. J., car shops. This position he maintained until his present appointment as superintendent of car department.

SPECIAL

Rae Ellwood Vreeland, whose recent appointment as superintendent of safety of the Central of New Jersey, was announced in the *Railway Age* of May 6, was born on

Rae Ellwood Vreeland

November 11, 1895, and joined the service of the Jersey Central on December 30, 1912, as a baggage porter. In May of the following year he became passenger brakeman, and was appointed passenger conductor on July 7, 1930. Mr. Vreeland was named assistant train rules examiner on May 23, 1942, becoming inspector of safety on March 16, 1943, and train rules examiner seven months later. In April of this year, Mr. Vreeland was named to the post of supervisor of safety, being advanced the following month to his present capacity of superintendent of safety, with headquarters at Jersey City, N. J.

Marshall L. Bowie, assistant to general manager of the Atlanta & West Point and the Georgia, has been named director of personnel of those roads and of the Western of Alabama, with headquarters at Atlanta, Ga.

OBITUARY

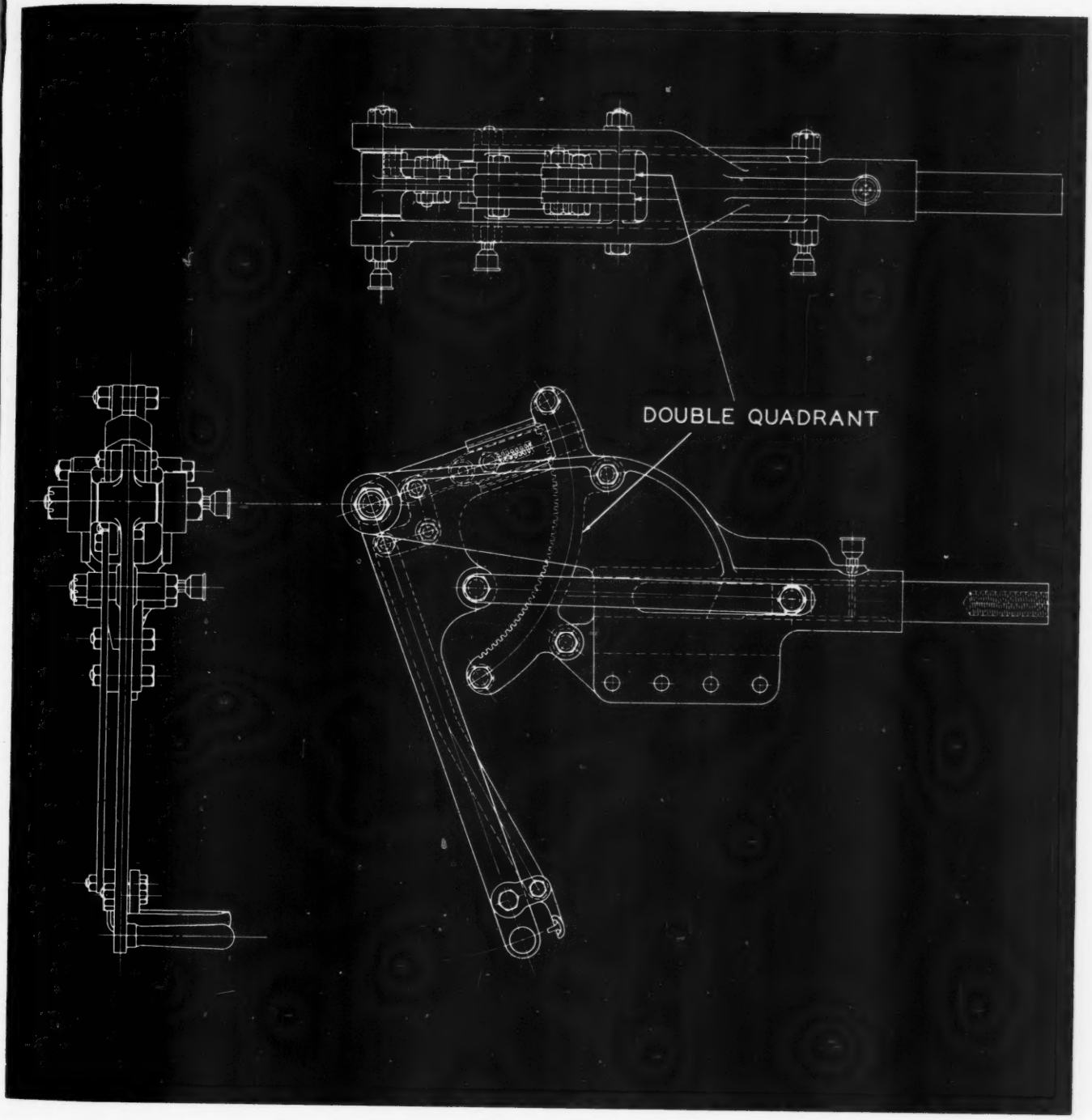
Harry J. Nelson, who retired on January 1, 1939, as assistant freight traffic manager of the Central of New Jersey, died on June 2 at his home, Elizabeth, N. J. He was 68 years old.

W. S. Butler, division superintendent of the Chesapeake & Ohio, with headquarters at Russell, Ky., died suddenly in that city on June 5. Mr. Butler was born in Yorkshire, England, on October 5, 1874, and entered railway service in 1894 as a machinist of the C. & O. at Clifton Forge, Va. From 1896 to 1898 he served as a machinist of the Norfolk & Western, the Southern, and the Atlantic Coast Line, and in 1899 he returned to the Chesapeake & Ohio in the same capacity, with headquarters at Huntington, W. Va. Later he was transferred to Handley, W. Va., and still later was promoted to roundhouse foreman and general foreman. In July, 1904, he was advanced to assistant master mechanic at Lexington, Ky., and in January, 1905, he was transferred to the Hinton division, with headquarters at Hinton, W. Va. In November of the same year he was appointed assistant master mechanic of the Huntington shops with jurisdiction over all departments, and was promoted to master mechanic in June, 1910. In October, 1911, Mr. Butler was given jurisdiction over the entire Huntington division, and in August of the following year the Hinton division was also added to his jurisdiction, with headquarters at Hinton. In January, 1913, he was appointed master mechanic of the Huntington, Logan, Big Sandy and Ashland divisions, with headquarters at Huntington, and on November 15, 1920, he was promoted to assistant to the general superintendent of the Western general division. In November, 1923, he was advanced to the position he held at the time of his death.

Mr. Butler has been a member of the executive council of the American Association of Railroad Superintendents for the past three years.

ENGLAND'S Great Western Railway recently carried over 200 container loads of world-famous art from the British Museum, the National and other well-known galleries. Hideouts were chosen by the railway, reports Associated British & Irish Railways, in New York. Among the National Gallery paintings which were stored away is a portrait of Richard II (1367-1400), and British Museum treasures date back to Montague House, first British Museum, which was opened in 1759.

(Table of Revenues and Expenses appears on next left-hand page.)



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REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1944

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1944	1943
Akron, Canton & Youngstown	April	171	$342,740	$131	$362,500	$66,222	$34,175	$18,827	$107,960	$244,994	67.6	$117,506	$72,515	$55,658	$123,895
	4 mos.	171	1,447,402	494	1,511,805	239,875	142,289	77,519	444,964	973,612	64.4	538,193	338,002	278,275	368,586
Alton	April	959	1,826,283	727,282	2,903,734	553,661	495,650	71,299	1,037,541	2,291,681	78.9	612,053	402,879	177,881	244,466
	4 mos.	959	7,843,434	2,903,602	12,024,864	1,506,900	1,765,043	278,337	4,147,872	8,213,761	68.3	3,811,103	2,438,577	1,534,436	1,969,220
Atchison, Topeka & Santa Fe System	April	13,123	26,650,900	9,139,552	38,945,033	5,165,916	6,475,617	640,391	11,111,088	24,010,798	61.7	14,934,235	4,284,039	4,050,194	5,145,355
	4 mos.	13,123	109,536,281	36,589,339	157,922,010	17,987,540	25,864,087	2,448,009	43,874,370	92,829,498	58.8	65,092,512	16,565,798	16,167,463	20,143,390
Atlanta & West Point	April	93	253,751	160,208	456,998	25,199	57,848	9,764	170,235	282,580	61.8	174,418	57,540	31,989	42,742
	4 mos.	93	1,036,905	607,186	1,816,095	174,459	219,917	38,149	607,777	1,118,445	61.6	697,650	225,451	124,828	167,226
Western of Alabama	April	133	244,948	160,375	440,886	45,402	60,125	10,010	140,909	273,217	62.0	167,669	51,824	49,684	56,587
	4 mos.	133	1,040,015	609,612	1,792,388	196,971	239,026	39,702	592,018	1,138,961	63.5	653,427	207,033	183,241	220,187
Atlanta, Birmingham & Coast	April	639	577,942	46,335	652,020	114,927	103,521	26,637	251,568	516,457	79.21	135,563	75,378	34,147	118,972
	4 mos.	639	2,228,446	181,736	2,537,281	427,441	406,952	114,953	966,187	2,003,734	78.97	533,547	266,767	119,788	365,992
Atlantic Coast Line	April	4,962	9,200,234	4,023,234	14,070,216	1,170,751	2,047,012	179,423	3,899,878	7,681,584	54.6	6,388,632	1,888,632	1,284,932	1,631,777
	4 mos.	4,962	36,340,120	15,738,463	55,596,316	4,516,398	7,767,562	767,836	15,416,232	30,061,765	54.1	25,534,551	8,034,551	5,958,779	7,611,397
Charleston & Western Carolina	April	343	366,669	11,672	385,895	67,083	55,026	7,877	112,557	249,713	64.7	136,182	76,182	72,725	106,656
	4 mos.	343	1,487,023	42,932	1,565,949	223,605	232,566	39,321	479,733	1,003,081	64.1	562,868	302,868	293,356	391,361
Baltimore & Ohio	April	6,156	26,891,304	4,085,343	32,481,678	4,773,038	6,451,490	526,090	10,266,393	23,036,802	70.9	9,444,876	5,048,024	4,360,497	7,070,676
	4 mos.	6,146	100,475,694	15,502,059	122,141,563	16,780,800	25,287,436	1,819,501	41,767,020	89,844,291	73.6	32,297,272	17,520,155	14,999,101	23,407,147
Staten Island Rapid Transit	April	24	343,251	108,303	460,269	35,531	38,025	1,584	124,139	225,590	49.0	234,679	148,208	125,909	64,824
	4 mos.	24	1,233,359	416,907	1,682,090	143,390	147,826	5,214	482,566	884,369	52.6	797,721	510,152	422,800	287,086
Bangor & Aroostook	April	602	761,618	73,825	864,714	140,563	113,799	6,479	204,559	496,146	57.4	368,568	148,921	163,282	212,367
	4 mos.	602	3,436,668	276,444	3,845,161	544,734	466,754	24,931	944,370	2,106,637	54.8	1,738,524	661,647	691,162	984,884
Bessemer & Lake Erie	April	214	1,660,379	1,844	1,676,375	152,560	744,394	13,939	334,353	1,284,395	76.6	391,980	332,355	470,646	—126,796
	4 mos.	214	4,315,058	6,758	4,380,845	580,946	2,817,476	58,837	1,212,794	4,823,324	110.1	—442,479	—676,806	257,884	—437,229
Boston & Maine	April	1,819	5,076,474	1,404,976	7,094,378	1,059,655	1,126,734	81,731	2,482,200	4,986,967	70.3	2,107,411	1,220,733	919,767	1,261,723
	4 mos.	1,819	19,759,870	5,984,049	28,250,214	4,628,492	5,006,671	299,547	10,765,431	21,548,173	76.3	6,702,041	3,911,104	2,737,421	4,370,359
Burlington, Rock Island	April	228	126,970	60,155	199,956	27,996	26,559	3,127	70,421	142,035	71.0	57,921	48,515	22,793	73,678
	4 mos.	228	555,914	255,544	864,204	103,742	99,974	12,375	274,709	547,842	63.4	316,362	280,235	180,796	212,471
Cambria & Indiana	April	35	147,837	.....	147,890	10,537	52,504	561	16,822	88,005	59.5	59,885	—25,998	51,548	39,607
	4 mos.	35	651,246	.....	651,495	35,050	189,435	2,423	84,965	340,537	52.2	310,958	—96,700	216,698	174,829
Canadian Pacific Lines in Maine	April	234	442,404	85,633	556,268	44,342	70,633	5,945	168,056	300,730	54.1	255,538	233,403	194,104	213,740
	4 mos.	234	1,955,659	296,392	2,365,046	171,351	330,830	25,055	709,247	1,285,798	54.4	1,079,248	989,734	835,756	631,227
Canadian Pacific Lines in Vermont	April	90	107,128	18,428	138,566	31,612	31,806	2,163	89,155	160,614	115.9	—22,048	—32,084	—63,488	—56,414
	4 mos.	90	354,384	62,250	465,302	117,749	136,204	9,178	381,361	667,044	143.4	—201,742	—239,277	—364,241	—277,657
Central of Georgia	April	1,815	2,060,617	670,435	2,998,553	425,180	502,789	69,527	1,140,918	2,276,652	75.9	721,901	445,125	385,884	918,051
	4 mos.	1,815	8,817,574	2,777,759	12,750,418	1,643,970	2,009,320	285,181	4,658,915	9,158,095	71.8	3,592,323	2,073,982	1,761,356	3,208,457
Central of New Jersey	April	655	4,068,155	573,764	4,935,219	512,332	872,848	48,927	2,051,635	3,634,521	73.6	1,300,698	848,655	436,651	627,364
	4 mos.	655	16,473,883	2,316,776	20,047,810	2,052,019	3,760,964	195,996	8,865,323	15,503,282	77.3	4,544,528	2,727,468	1,305,363	2,140,802
Central Vermont	April	422	539,656	65,000	669,563	104,451	113,760	10,162	306,339	560,746	83.7	108,817	63,524	7,895	116,904
	4 mos.	422	2,445,160	258,000	2,921,313	418,196	444,286	39,574	1,298,279	2,305,741	78.9	615,572	430,713	226,160	320,838
Chesapeake & Ohio	April	3,073	15,462,174	2,066,713	18,203,525	2,116,052	3,583,181	224,683	4,681,085	11,205,339	61.6	6,998,186	2,507,024	2,749,442	3,197,998
	4 mos.	3,073	61,681,672	8,102,348	72,105,854	8,229,323	13,843,446	964,142	18,877,724	44,282,926	61.4	27,822,928	9,578,347	11,106,814	12,455,738
Chicago & Eastern Illinois	April	912	1,971,650	667,770	2,887,469	342,404	447,593	66,347	989,161	1,958,316	67.8	929,153	623,153	350,225	461,406
	4 mos.	912	7,813,622	2,386,409	11,206,298	1,237,650	1,782,837	238,442	4,102,989	7,784,912	69.5	3,421,386	2,292,386	1,256,471	1,633,896
Chicago & Illinois Midland	April	131	545,755	1,445	572,733	72,341	88,699	22,227	138,434	349,737	61.1	222,996	75,455	77,168	89,892
	4 mos.	131	2,095,328	5,384	2,212,141	284,185	353,336	88,644	566,042	1,398,498	63.2	813,643	296,438	308,262	351,610
Chicago & North Western	April	8,101	8,781,254	2,941,644	12,946,559	1,888,270	2,420,743	216,227	4,448,471	9,467,579	73.1	3,478,980	1,521,457	1,580,547	2,887,210
	4 mos.	8,101	36,131,426	11,349,963	52,689,434	7,053,999	9,630,134	836,792	18,325,670	37,821,055	71.8	14,868,379	7,527,984	7,603,447	9,444,367
Chicago, Burlington & Quincy	April	8,991	12,828,375	3,316,820	17,815,743	3,038,247	2,610,131	303,001	4,827,185	11,364,853	63.8	6,450,890	2,173,087	1,854,614	3,628,337
	4 mos.	8,991	56,864,237	13,070,032	76,410,147	10,410,963	10,470,780	1,157,727	19,982,034	44,333,132	58.0	32,077,015	10,331,215	8,952,237	15,624,083
Chicago Great Western	April	1,500	2,090,567	265,116	2,540,088	310,474	325,064	64,858	901,913	1,688,971	66.5	851,117	435,072	285,783	303,975
	4 mos.	1,500	8,436,137	982,999	10,179,505	1,359,033	1,264,297	257,312	3,724,859	6,912,517	67.9	3,266,988	1,776,673	1,113,848	1,164,172
Chicago, Indianapolis & Louisville	April	541	937,732	116,574	1,132,883	116,151	186,013	31,814	349,647	724,313	63.9	408,570	288,324	252,093	330,987
	4 mos.	541	3,802,836	418,027	4,552,912	444,260	751,336	129,630	1,424,217	2,909,700	63.9	1,643,212	1,202,378	1,023,048	1,174,608

Chicago Great Western	4 mos.	1,500									63.9	1,643,212	1,202,378	1,023,048	1,174,608	
Chicago, Indianapolis & Louisville	April	541	937,732	116,574	1,132,883	116,151	186,013	31,814	349,647	724,313	63.9	408,570	288,324	252,095	356,226	
	4 mos.	541	3,802,836	418,027	4,552,912	444,260	751,336	129,630	1,424,217	2,909,700	63.9	1,643,212	1,202,378	1,023,048	1,174,608	

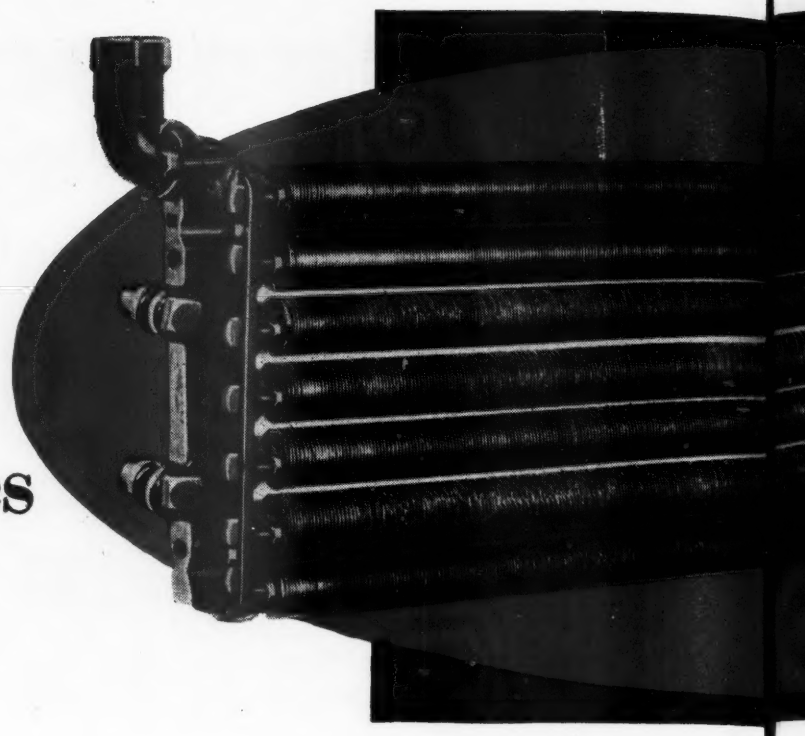
REVENUES AND EXPENSES OF RAILWAYS

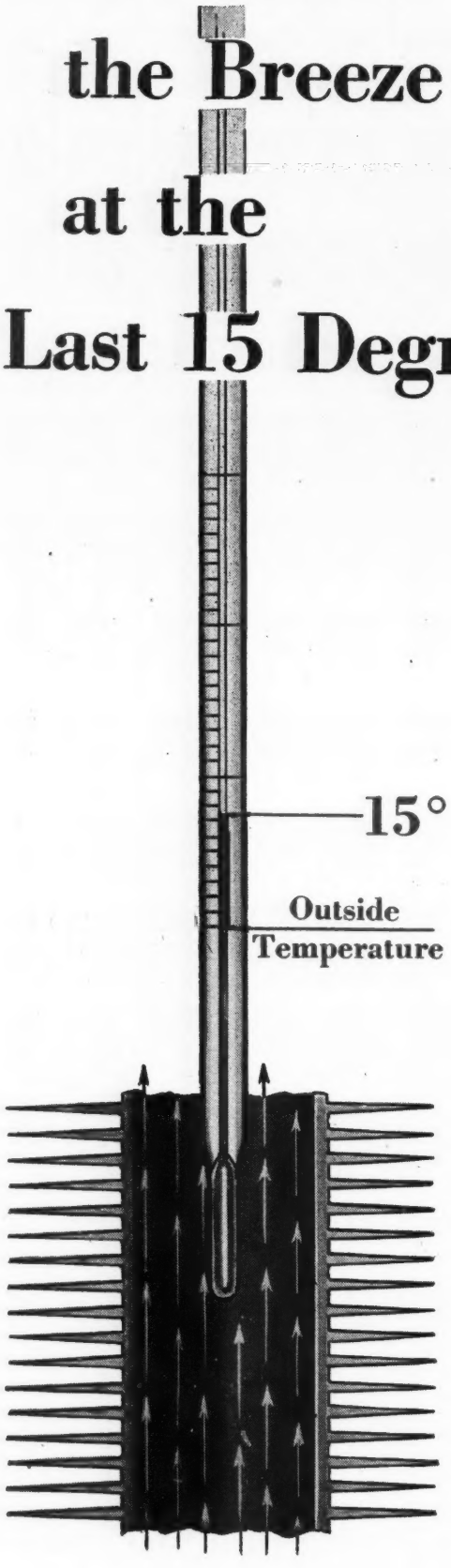
MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	Net railway operating income 1943
Chicago, Milwaukee, St. Paul & Pacific	April	10,722	$12,776,609	$2,553,780	$17,052,927	$2,686,072	$2,815,312	$271,143	$5,993,183	$12,410,761	72.8	$4,642,166	$2,822,166	$2,522,834	$5,326,117
	4 mos.	10,736	55,697,861	9,854,894	71,859,138	10,119,428	11,158,122	1,011,955	24,677,449	49,660,952	69.1	22,198,186	11,077,186	10,139,758	18,899,829
Chicago, Rock Island & Pacific	April	7,751	9,732,990	3,687,065	14,591,063	1,876,055	2,149,645	347,438	4,405,950	9,414,761	64.5	5,176,302	2,524,257	2,028,479	3,600,924
	4 mos.	7,751	40,966,028	14,014,327	59,559,951	6,584,099	8,596,415	1,337,780	17,717,234	36,703,243	61.6	22,856,708	11,300,669	9,387,395	15,563,613
Chicago, St. Paul, Minneapolis & Omaha	April	1,617	1,639,314	316,156	2,145,358	345,582	312,658	34,505	972,903	1,747,737	81.5	397,621	258,349	207,914	472,601
	4 mos.	1,617	6,934,980	1,323,291	9,024,048	1,201,530	1,327,861	157,114	3,957,564	6,965,983	77.2	2,058,065	1,334,852	1,055,904	1,471,408
Clinchfield	April	302	1,122,998	10,450	1,142,808	85,395	185,501	26,509	238,437	557,431	48.8	585,377	457,150	469,236	502,997
	4 mos.	302	4,789,736	40,611	4,865,911	327,786	740,777	95,089	1,010,136	2,260,112	46.4	2,605,799	2,095,244	2,126,791	2,060,451
Colorado & Southern	April	748	863,622	302,290	1,261,495	124,120	198,148	18,885	390,419	779,481	61.8	482,014	297,198	252,541	248,262
	4 mos.	748	3,463,129	1,232,912	5,098,129	500,884	826,822	69,725	1,555,930	3,135,529	61.5	1,962,600	1,217,819	1,044,058	1,016,711
Fort Worth & Denver City	April	804	614,854	480,039	1,194,582	225,709	130,287	25,149	318,303	758,248	63.5	436,334	253,477	214,159	329,978
	4 mos.	804	2,750,429	1,770,432	4,931,771	894,339	538,479	95,475	1,282,038	3,049,056	61.8	1,882,715	1,092,329	931,882	1,095,444
Cclorado & Wyoming	April	42	80,731	.....	133,608	11,493	19,195	683	57,319	93,362	69.8	40,246	26,847	26,064	22,900
	4 mos.	42	360,738	.....	589,876	41,051	77,932	3,064	233,180	373,340	63.2	216,536	150,902	147,697	93,166
Columbus & Greenville	April	168	100,343	14,137	122,329	23,157	19,604	4,827	43,933	105,288	86.1	17,041	3,186	5,544	9,332
	4 mos.	168	423,982	46,793	507,929	94,779	70,462	17,709	170,089	406,827	80.1	101,102	34,307	40,786	50,039
Delaware & Hudson	April	846	3,895,376	191,625	4,181,456	467,313	1,020,488	47,170	1,418,830	3,070,487	73.4	1,110,969	648,426	612,317	838,001
	4 mos.	847	16,088,228	713,670	17,184,396	1,773,547	4,109,908	187,560	5,898,525	12,438,503	72.4	4,745,893	3,319,448	3,256,553	2,778,352
Delaware, Lackawanna & Western	April	973	4,945,492	860,149	6,425,617	701,148	1,084,623	119,007	2,630,519	4,668,942	72.7	1,756,675	801,675	691,867	1,263,886
	4 mos.	973	19,998,634	3,392,658	25,789,777	2,769,759	4,353,006	459,436	10,871,015	19,177,468	74.4	6,612,309	3,091,309	2,685,584	4,184,801
Denver & Rio Grande Western	April	1,391	4,460,243	872,969	5,575,877	784,328	1,084,897	101,870	1,631,650	3,798,041	68.1	1,777,836	1,492,121	1,425,735	1,525,031
	4 mos.	2,397	18,227,180	3,257,028	22,427,744	2,639,901	4,525,437	393,800	6,890,145	15,226,198	67.9	7,201,546	4,850,515	4,511,551	5,469,693
Denver & Salt Lake	April	232	248,405	10,105	267,066	59,569	51,657	2,826	91,920	218,327	81.7	48,739	18,927	63,247	60,557
	4 mos.	232	1,023,162	35,954	1,097,472	217,849	216,038	10,588	377,997	869,968	79.3	227,504	108,914	303,282	373,465
Detroit & Mackinac	April		62,885	10,180	80,388	15,024	17,864	816	30,509	68,620	85.4	11,768	6,979	5,133	2,761
	4 mos.		237,703	34,822	304,443	55,238	70,753	3,361	125,653	270,870	89.0	33,573	16,049	7,709	15,954
Detroit & Toledo Shore Line	April	50	346,069	.....	347,046	33,309	23,894	9,964	102,254	178,379	51.4	168,667	105,779	58,366	78,023
	4 mos.	50	1,665,818	.....	1,670,588	132,214	103,444	38,204	437,978	746,654	44.7	923,934	493,413	258,568	371,038
Detroit, Toledo & Ironton	April	464	699,875	1,411	730,878	91,370	124,714	16,300	183,228	439,257	60.1	291,621	156,606	164,386	209,841
	4 mos.	464	3,180,712	4,762	3,363,291	344,347	487,540	59,834	824,672	1,818,219	54.1	1,545,072	886,255	848,714	996,185
Duluth, Missabe & Iron Range	April	545	2,664,656	5,188	3,087,358	379,021	482,400	3,262	658,794	1,564,599	50.7	1,522,759	1,291,934	1,299,450	—12,540
	4 mos.	545	3,226,231	20,601	3,781,614	1,436,512	2,160,219	16,874	1,503,696	5,270,129	139.4	—1,488,515	—1,967,550	—1,842,514	—2,690,230
Duluth, Winnipeg & Pacific	April	175	364,000	3,000	371,100	47,972	35,545	2,074	133,513	223,555	60.2	147,545	121,249	87,331	38,965
	4 mos.	175	1,254,000	12,200	1,283,900	167,073	135,063	8,005	519,970	846,633	65.9	437,267	345,207	181,585	80,210
Elgin, Joliet & Eastern	April	392	2,253,577	13	2,637,325	269,721	760,503	16,383	1,030,535	2,138,171	81.1	499,154	165,125	110,939	139,654
	4 mos.	392	9,761,822	47	11,217,974	1,007,968	3,025,470	66,760	4,160,504	8,521,729	76.0	2,696,245	1,240,827	954,407	500,949
Erie	April	2,244	11,145,569	911,726	12,859,236	1,327,477	2,145,152	220,229	4,633,713	8,762,125	68.1	4,097,111	2,030,389	1,337,786	2,038,836
	4 mos.	2,244	46,352,309	4,037,284	53,516,837	4,627,820	9,030,589	897,889	19,805,202	36,092,108	67.4	17,424,729	8,356,305	5,705,638	6,808,027
Florida East Coast	April	682	1,826,338	1,143,396	3,186,203	325,245	275,874	48,928	802,641	1,588,203	49.8	1,598,000	563,219	373,744	953,251
	4 mos.	682	7,159,465	4,730,329	12,779,235	1,326,087	1,131,692	196,805	3,259,025	6,415,552	50.2	6,363,683	3,447,440	2,887,072	3,692,492
Georgia Railroad	April	329	640,909	179,130	866,661	71,815	117,083	22,564	302,354	540,120	62.3	326,541	294,501	278,318	379,501
	4 mos.	329	2,564,707	659,620	3,407,159	358,079	458,314	86,818	1,219,698	2,214,528	65.0	1,192,631	1,053,398	1,044,334	1,438,533
Georgia & Florida	April	408	161,887	8,249	175,362	49,127	25,323	9,539	64,656	156,342	89.2	19,020	8,491	—355	11,726
	4 mos.	408	730,763	27,039	779,134	196,229	97,235	41,562	259,143	623,831	80.1	155,303	113,375	69,276	59,999
Grand Trunk Western	April	1,026	2,427,000	274,000	2,887,000	491,222	480,812	36,659	1,157,147	2,271,141	78.7	615,859	426,884	391,812	640,942
	4 mos.	1,026	9,904,000	1,230,000	11,880,000	1,861,593	1,958,747	142,142	4,596,730	8,986,019	75.6	2,893,981	1,972,156	1,842,106	2,564,008
Canadian National Lines in New England	April	172	135,900	9,900	178,500	40,225	42,905	2,280	89,294	197,706	110.8	—19,206	—40,651	—80,563	—113,204
	4 mos.	172	499,100	32,600	654,300	165,245	144,159	9,145	382,061	777,728	118.9	—123,428	—209,208	—360,227	—353,751
Great Northern	April	8,372	14,431,797	1,589,861	17,124,734	2,862,133	2,945,564	228,857	4,477,425	10,976,618	64.1	6,148,116	2,534,777	2,223,325	1,956,132
	4 mos.	8,373	51,298,434	6,177,427	61,490,824	9,864,123	11,408,774	837,764	18,256,398	42,191,761	68.6	19,299,063	7,613,714	7,085,019	7,082,032
Green Bay & Western	April	234	203,539	606	209,872	66,723	13,261	8,432	73,759	164,529	78.3	45,343	14,757	10,602	43,653
	4 mos.	234	914,649	2,099	945,058	228,129	91,163	33,276	271,346	654,858	69.2	290,200	155,499	136,155	208,071
Gulf & Ship Island	April	259	157,265	70,826	254,322	50,573	22,746	2,855	82,105	167,104	65.7	87,218	67,658	54,397	—38,984
	4 mos.	259	754,067	203,647	1,047,662	171,700	85,622	9,916	359,009	664,985	63.5	382,677	305,452	251,884	—29,918

(Table continued on second left-hand page)

Directing the Breeze at the Last 15 Degrees





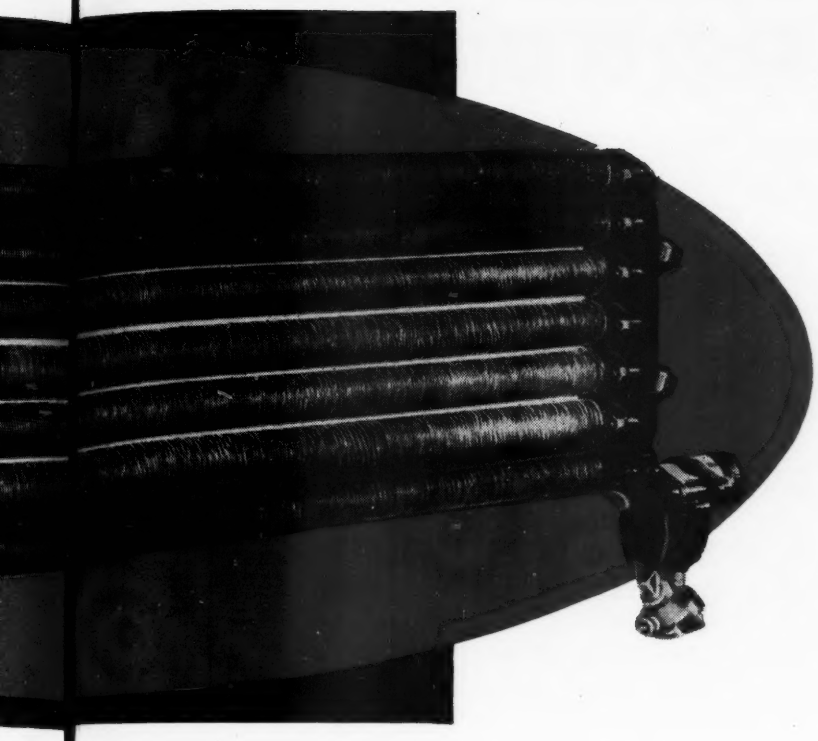
THE efficiency of an Aftercooler is gaged by its ability to cool compressed air to outside (atmospheric) temperature.

Most of the heat, generated by compressing air, is radiated in transit between the compressor discharge and the outlet of the first main reservoir. On normal installations the air is thus cooled to within fifteen degrees of outside temperature.

However, it is this last fifteen degrees that must be lured away. Small as it is, this heat can carry the harmful quantity of vapor to the brake system, even in the most arid climate.

By strategic location of a large, efficient radiating area, the Aftercooler *directs the breeze at the last fifteen degrees* and precipitates the moisture that might later freeze or saturate a single valve, and thus impair the brake functions of the train.

Westinghouse Air Brake



Air Stream Radiation

Compact Radiating Area

Finned copper tubing consolidates the largest practicable radiating area into the smallest possible space.

The compact unit comprises three times as much radiating surface as provided by iron pipe, plus the advantages of location, accessibility, and less likelihood of internal frosting.

Air Stream Radiation

Front end location exposes Aftercooler to both frontal and lateral air streams.

Full benefit of prevailing winds is gained, regardless of their direction.

Fins are scientifically spaced to avoid hot air pocketing.

Remoteness from boiler eliminates possibility of re-heating.

Company · Wilmerding. Pa.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1944	1943
Gulf, Mobile & Ohio	April	1,973	$2,777,185	$279,881	$3,153,467	$505,674	$502,484	$79,210	$854,543	$2,061,392	65.4	$1,092,075	$576,779	$422,077	$497,727
	4 mos.	1,973	10,970,929	889,715	12,252,307	1,997,231	2,060,482	317,467	3,359,654	8,195,344	66.9	4,056,963	2,106,597	1,537,634	1,859,998
Illinois Central	April	4,823	14,079,384	3,236,187	18,544,237	2,353,487	3,204,588	168,291	5,076,585	11,420,669	61.6	7,123,568	2,938,315	2,660,025	2,864,882
	4 mos.	4,823	56,185,959	11,748,548	72,461,057	9,166,661	12,958,043	766,446	21,113,680	46,492,970	64.2	25,968,087	10,419,834	9,249,452	11,955,856
Yazoo & Mississippi Valley	April	1,524	1,881,828	449,947	2,485,907	441,662	291,338	26,674	897,119	1,748,698	70.3	737,209	381,819	280,905	505,566
	4 mos.	1,524	9,339,234	1,665,338	11,656,994	1,662,965	1,303,729	123,037	3,792,944	7,252,203	62.2	4,404,791	2,000,620	1,601,485	2,354,638
Illinois Central System	April	6,347	15,961,212	3,686,134	21,030,144	2,795,149	3,495,926	194,965	5,973,704	13,169,367	62.6	7,860,777	3,315,330	2,945,842	3,370,360
	4 mos.	6,347	65,525,193	13,413,886	84,118,051	10,829,626	14,261,772	889,483	24,906,624	53,745,173	63.9	30,372,878	12,402,122	10,867,588	14,319,145
Illinois Terminal	April	476	675,120	178,437	938,974	98,591	98,518	19,637	271,997	514,454	54.79	424,520	147,649	117,757	114,944
	4 mos.	476	2,779,012	691,588	3,785,317	362,230	359,370	79,311	1,145,200	2,054,613	54.28	1,730,704	590,342	476,306	459,419
Kansas City Southern	April	878	3,386,738	585,726	4,175,267	566,641	539,142	63,023	1,000,932	2,291,972	54.9	1,883,295	945,295	668,288	827,141
	4 mos.	878	12,095,935	1,853,631	14,761,751	2,093,937	2,004,409	248,578	4,036,299	8,885,771	60.2	5,875,980	2,828,980	1,892,734	2,546,586
Kansas, Oklahoma & Gulf	April	328	325,352	1,628	329,654	44,678	21,065	10,085	78,071	164,971	50.0	164,683	94,836	68,274	79,066
	4 mos.	328	1,353,798	6,135	1,372,318	143,985	88,196	37,031	319,273	631,522	46.0	740,796	411,946	313,459	396,333
Lake Superior & Ishpening	April	156	181,498	229	234,898	27,336	30,810	555	53,303	120,325	51.2	114,573	88,909	98,416	15,997
	4 mos.	156	298,927	545	367,086	98,902	166,557	2,308	147,366	448,228	122.1	—81,142	—185,806	—150,933	—256,559
Lehigh & Hudson River	April	96	292,822	.....	293,232	48,236	34,439	5,460	81,261	176,285	60.1	116,947	46,886	26,287	35,106
	4 mos.	96	1,179,942	1,653	1,185,314	169,711	134,797	21,015	350,799	705,264	59.5	480,050	192,021	106,908	127,043
Lehigh & New England	April	190	515,796	.....	519,182	50,882	121,339	8,385	150,331	349,700	67.4	169,482	91,434	103,502	135,824
	4 mos.	190	2,077,749	.....	2,089,646	190,808	476,674	31,303	618,968	1,397,703	66.9	691,943	374,564	415,348	450,817
Lehigh Valley	April	1,260	7,327,958	764,260	8,539,932	1,337,552	1,269,081	119,523	3,055,685	6,008,310	70.4	2,531,622	1,328,455	815,339	1,350,866
	4 mos.	1,260	27,988,788	2,879,374	32,601,127	4,450,884	5,156,072	483,835	12,444,100	23,406,403	71.8	9,194,724	5,011,101	3,230,759	4,641,479
Louisiana & Arkansas	April	834	1,408,755	144,758	1,618,064	357,886	185,584	33,406	368,041	1,005,873	62.2	612,191	224,159	158,482	193,028
	4 mos.	834	5,699,756	603,483	6,548,485	1,416,978	715,827	144,770	1,441,706	3,973,486	60.7	2,574,999	949,931	685,759	795,851
Louisville & Nashville	April	4,745	11,992,388	3,813,346	16,899,840	1,772,641	2,978,249	202,878	5,188,531	10,700,872	63.3	6,198,968	1,622,402	1,854,498	2,355,913
	4 mos.	4,745	51,007,577	14,776,206	70,031,029	7,745,247	12,147,902	789,376	20,058,553	43,122,893	61.6	26,908,136	7,035,393	8,174,274	8,777,375
Maine Central	April	988	1,186,426	350,165	1,643,418	244,414	253,115	11,842	521,742	1,076,204	65.5	567,214	189,834	155,875	300,582
	4 mos.	988	5,067,493	1,215,249	6,701,976	1,190,862	1,127,191	53,710	2,434,985	5,007,515	74.7	1,694,461	884,187	678,866	1,146,080
Midland Valley	April	334	134,835	315	137,232	37,473	14,935	2,574	46,283	105,951	77.2	31,281	28,085	16,403	56,984
	4 mos.	334	549,179	964	557,820	95,366	48,183	9,595	185,489	358,034	64.2	199,786	132,769	85,061	199,061
Minneapolis & St. Louis	April	1,408	1,061,453	40,143	1,148,859	220,574	162,499	60,758	368,465	871,622	75.9	277,237	184,079	187,759	292,104
	4 mos.	1,408	4,511,100	149,789	4,847,082	822,155	697,532	265,690	1,550,000	3,564,311	73.5	1,282,771	638,609	628,732	1,299,001
Minneapolis, St. Paul & Sault Ste. Marie	April	4,277	4,153,375	222,083	4,648,584	617,481	672,806	75,003	1,500,875	2,987,328	64.3	1,661,256	1,396,826	1,335,824	837,076
	4 mos.	4,277	15,125,641	879,050	17,010,904	2,313,735	2,756,646	288,481	6,288,304	12,138,941	71.4	4,871,963	3,736,232	3,462,912	1,990,500
Duluth, South Shore & Atlantic	April	551	300,405	26,314	345,870	61,204	58,288	7,856	120,460	255,328	73.8	90,542	88,813	82,424	83,903
	4 mos.	551	1,258,394	116,079	1,451,729	240,302	214,325	34,909	541,639	1,063,812	73.3	387,917	325,162	292,297	188,342
Spokane International	April	152	167,938	11,038	188,243	41,955	13,559	3,331	51,554	116,764	62.0	71,479	41,727	32,624	27,317
	4 mos.	152	604,176	38,127	675,339	194,117	56,179	13,666	194,644	486,170	72.0	189,169	119,286	71,952	126,960
Mississippi Central	April	158	178,013	11,088	191,241	28,187	16,199	8,326	50,087	109,576	57.3	81,665	54,429	38,972	29,291
	4 mos.	158	715,157	25,281	749,855	116,389	66,788	35,913	207,620	457,154	61.0	292,701	187,331	133,777	118,798
Missouri & Arkansas	April	365	146,921	3,312	157,495	41,943	22,852	6,994	62,775	141,123	89.6	16,372	10,000	—4,225	27,007
	4 mos.	365	719,573	14,367	771,845	175,553	87,148	29,943	264,397	583,598	75.6	188,247	122,393	53,130	73,626
Missouri-Illinois	April	172	236,349	1,226	238,863	43,200	41,980	3,295	56,966	149,469	62.6	89,394	25,079	22,243	56,882
	4 mos.	172	997,591	4,868	1,007,892	169,990	152,406	15,291	243,047	602,110	59.7	405,782	150,073	130,833	154,577
Missouri-Kansas-Texas Lines	April	3,253	4,913,574	1,053,236	6,452,671	1,543,243	873,116	130,147	2,023,514	4,820,464	74.7	1,632,207	751,743	348,579	402,147
	4 mos.	3,278	18,885,072	4,248,158	25,110,607	4,945,194	3,292,357	528,326	7,849,025	17,584,670	70.0	7,525,937	4,288,612	2,819,301	3,077,028
Missouri Pacific	April	7,097	13,670,973	3,675,896	18,635,658	2,226,327	2,625,617	318,836	5,326,511	11,048,641	59.3	7,587,017	3,377,476	2,464,554	3,797,727
	4 mos.	7,097	56,812,961	14,043,346	76,129,272	8,264,845	10,361,690	1,196,287	21,868,854	43,868,821	57.6	32,260,451	14,554,572	11,163,826	15,681,397
Gulf Coast Lines	April	1,734	4,123,720	343,883	4,622,591	618,795	303,403	71,887	913,224	1,993,825	43.13	2,628,766	1,096,909	779,039	556,530
	4 mos.	1,734	15,946,352	1,384,702	17,904,350	2,269,401	1,391,391	231,685	3,849,661	8,100,841	45.25	9,803,509	4,175,413	2,824,229	2,232,242
International Great Northern	April	1,110	1,856,545	524,241	2,620,051	431,402	356,645	34,336	881,269	1,806,057	68.9	813,994	479,105	265,835	355,080
	4 mos.	1,110	7,236,753	1,989,046	1,016,176	1,662,401	1,347,774	139,826	3,240,473	6,794,688	66.9	3,366,488	1,855,739	1,195,047	1,580,743
Monongahela	April	170	562,623	1,847	572,019	69,916	44,451	691	137,665	256,084	44.8	315,935	211,997	127,288	130,738
	4 mos.	170	2,254,689	7,062	2,280,090	276,351	181,367	3,217	580,485	1,058,835	46.4	1,221,255	799,045	460,551	583,925

REVENUES AND EXPENSES OF RAILWAYS

Monongahela	April	170	562,623	1,847	572,019	69,916	44,451	691	137,665	256,084	44.8	315,935	211,997	127,288	130,738
	4 mos.	170	2,254,689	7,062	2,280,090	276,351	181,367	3,217	580,485	1,058,835	46.4	1,221,255	799,045	460,551	583,925

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	Net railway operating income 1943
Montour	April	51	$244,528	.....	$245,227	$15,159	$64,613	$1,015	$70,296	$159,684	65.1	$85,543	$22,960	$65,944	$65,798
	4 mos.	51	939,030	.....	944,213	60,739	259,414	3,980	291,857	648,546	68.7	295,667	74,463	226,746	250,912
Nashville, Chattanooga & St. Louis	April	1,072	2,486,566	$650,374	3,364,322	733,351	580,250	41,920	1,003,718	2,453,862	72.9	910,460	468,726	421,860	245,368
	4 mos.	1,072	10,283,510	2,742,323	14,106,084	2,346,326	2,751,025	305,697	4,406,846	10,226,340	72.5	3,879,744	2,089,317	1,921,282	2,319,371
New York Central	April	10,746	37,785,008	13,387,490	56,230,960	8,226,202	10,238,142	710,877	21,090,245	42,426,965	75.5	13,803,995	6,704,791	5,016,337	7,561,566
	4 mos.	10,746	156,109,804	55,857,249	232,991,702	32,423,930	42,661,656	2,759,428	86,779,496	173,684,301	74.5	59,307,401	27,477,664	20,453,991	30,755,720
Pittsburgh & Lake Erie	April	229	2,655,349	109,002	2,850,265	310,268	937,183	43,699	881,418	2,278,777	80.0	571,488	—128,520	417,024	630,962
	4 mos.	229	10,669,334	410,688	11,444,124	1,210,437	3,642,509	174,241	3,732,578	9,194,115	80.3	2,250,009	—522,427	1,688,094	2,291,513
New York, Chicago & St. Louis	April	1,688	7,861,667	336,448	8,341,803	820,190	1,201,055	144,419	2,536,143	4,912,469	58.9	3,429,334	1,442,662	938,544	1,171,396
	4 mos.	1,688	31,732,917	1,654,245	33,995,334	3,335,510	4,739,170	540,222	10,623,580	20,049,727	59.0	13,945,607	5,839,734	3,764,258	4,616,229
New York, New Haven & Hartford	April	1,838	8,128,790	6,089,169	15,360,736	2,099,493	2,268,385	135,485	5,223,580	10,436,714	67.9	4,924,022	3,286,630	2,167,529	3,437,711
	4 mos.	1,838	32,267,630	22,748,001	59,616,088	7,521,047	8,987,807	624,878	21,398,020	41,377,911	69.4	18,238,177	12,026,593	7,726,819	10,766,450
New York Connecting	April	21	212,617	.....	236,859	57,478	11,719	.....	52,719	125,612	53.0	111,247	—37,480	107,868	76,781
	4 mos.	21	811,916	.....	913,667	220,409	52,909	.....	216,967	498,773	54.6	414,894	47,061	550,943	449,951
New York, Ontario & Western	April	546	638,161	22,777	715,078	88,456	152,483	23,786	445,958	737,997	103.2	—22,919	—64,377	—119,089	31,351
	4 mos.	546	2,612,235	77,754	2,944,852	329,519	581,360	89,709	1,719,029	2,826,843	96.0	118,009	—41,558	—213,592	—62,670
New York, Susquehanna & Western	April	120	423,304	35,197	468,553	40,311	54,309	4,458	172,571	286,806	61.2	181,747	138,307	64,297	62,143
	4 mos.	120	1,921,099	137,766	2,119,114	138,019	199,349	17,842	739,039	1,158,324	54.7	960,790	644,932	332,614	349,267
Norfolk & Western	April	2,154	11,240,749	1,349,034	12,980,906	1,367,971	2,582,744	166,327	2,949,325	7,402,413	57.0	5,578,493	1,574,919	2,260,287	2,159,795
	4 mos.	2,154	44,599,755	5,520,740	51,828,872	5,857,867	10,663,245	615,565	11,551,856	30,140,151	58.2	21,688,721	5,633,503	8,498,412	7,824,817
Norfolk Southern	April	727	627,599	17,099	664,786	167,704	82,129	28,716	230,069	537,195	80.8	127,591	76,610	47,093	65,445
	4 mos.	728	2,433,849	102,269	2,623,473	676,348	316,604	105,834	933,120	2,132,202	81.3	491,271	293,824	188,749	319,959
Northern Pacific	April	6,867	9,461,378	1,742,814	12,174,219	1,701,444	2,393,934	185,657	3,663,944	8,531,697	70.1	3,642,522	1,289,481	1,674,523	2,585,766
	4 mos.	6,867	37,969,303	6,759,828	48,701,048	6,414,330	9,690,257	706,650	14,824,273	33,962,879	69.7	14,738,169	5,312,569	6,752,649	9,198,949
Northwestern Pacific	April	331	441,831	17,678	476,962	155,950	45,269	2,170	148,217	358,235	75.1	118,727	94,878	75,087	44,624
	4 mos.	331	1,757,138	64,474	1,900,745	700,110	237,510	10,262	617,914	1,592,544	83.8	308,201	194,949	110,960	197,322
Oklahoma City-Ada-Atoka	April	132	125,119	982	127,729	18,222	6,087	1,342	25,883	55,784	43.7	71,945	40,608	29,276	21,070
	4 mos.	132	508,300	2,616	517,200	74,713	20,388	5,314	117,964	236,743	45.8	280,457	159,822	103,679	90,687
Pennsylvania	April	10,099	55,200,399	21,753,367	83,113,472	9,824,747	15,739,533	1,001,847	31,867,050	61,156,160	73.6	21,957,312	8,063,663	6,817,728	13,303,471
	4 mos.	10,103	221,123,388	83,351,320	327,629,742	37,034,318	62,583,522	4,164,631	131,334,662	246,368,255	75.2	81,261,487	33,891,763	29,728,495	36,168,254
Long Island	April	376	1,225,408	2,159,940	3,580,120	606,607	570,433	26,185	1,599,119	2,855,982	79.8	724,138	382,169	118,894	—10,357
	4 mos.	376	4,816,753	7,794,024	13,305,238	2,303,174	2,193,172	98,646	6,476,195	11,299,649	84.9	2,005,589	784,540	—172,579	—118,930
Pennsylvania-Reading Seashore Lines	April	392	522,179	292,398	845,866	160,717	92,854	7,032	480,990	763,054	90.2	82,812	—10,235	—118,236	—76,715
	4 mos.	392	1,944,610	929,732	3,006,562	629,395	402,874	28,749	1,791,911	2,944,014	97.9	62,548	—294,995	—694,036	—386,899
Pere Marquette	April	1,979	4,060,601	338,712	4,582,099	771,491	803,795	73,369	1,632,810	3,466,151	75.6	1,115,948	450,595	345,250	718,000
	4 mos.	1,979	16,466,516	1,224,835	18,455,453	2,946,336	3,239,651	287,308	6,636,289	13,847,542	75.0	4,607,911	1,772,337	1,519,770	2,545,973
Pittsburg & Shawmut	April	97	107,366	.....	107,656	31,380	24,788	2,480	29,906	94,357	87.6	13,299	8,967	8,640	23,652
	4 mos.	97	506,631	.....	509,096	97,117	96,360	7,871	142,060	368,305	72.3	140,791	112,553	105,749	88,235
Pittsburgh & West Virginia	April	136	566,826	.....	584,545	103,825	123,729	21,423	149,630	425,312	72.8	159,233	96,619	114,420	174,478
	4 mos.	136	2,266,094	26	2,339,857	349,931	471,974	85,730	584,789	1,596,562	68.2	743,295	450,496	555,964	591,110
Pittsburg, Shawmut & Northern	April	190	94,286	.....	95,311	25,419	21,816	1,171	45,405	99,535	104.4	—4,224	—11,280	—17,034	20,128
	4 mos.	190	437,197	.....	442,460	91,090	93,820	4,414	192,370	405,687	91.7	36,773	9,445	—14,372	62,341
Reading	April	1,412	8,314,088	872,625	9,620,341	1,151,200	1,873,949	83,127	3,193,906	6,502,821	67.6	3,117,520	1,309,037	1,251,969	2,037,339
	4 mos.	1,415	33,882,154	3,340,086	39,026,630	4,226,219	7,435,116	330,106	13,845,714	26,638,157	68.3	12,388,473	5,889,841	5,089,045	7,159,155
Richmond, Fredericksburg & Potomac	April	118	1,654,017	1,449,868	3,387,093	224,339	380,779	13,434	694,748	1,440,495	42.5	1,946,598	505,919	320,307	302,392
	4 mos.	118	6,371,821	5,528,285	13,028,011	734,497	1,351,961	55,087	3,112,179	5,714,597	43.9	7,313,414	1,929,999	1,188,410	1,404,024
Rutland	April	407	280,785	49,696	393,013	58,436	85,298	12,307	195,940	366,700	93.3	26,313	1,906	2,817	38,073
	4 mos.	407	1,085,896	211,772	1,537,515	229,606	348,837	47,734	819,739	1,507,082	98.0	30,433	—69,937	—65,753	77,064
St. Louis-San Francisco	April	4,646	6,541,472	1,983,642	9,165,137	1,588,204	1,672,513	159,350	2,902,492	6,633,208	72.4	2,531,929	1,144,370	1,144,631	2,006,231
	4 mos.	4,656	26,075,011	7,715,507	36,416,798	5,052,442	6,875,000	663,137	12,077,335	26,007,732	71.4	10,409,066	5,134,620	5,155,686	7,569,119
St. Louis, San Francisco & Texas	April	159	294,833	26,195	328,532	36,614	26,607	10,824	102,347	183,398	55.8	145,134	57,260	31,087	123,880
	4 mos.	159	1,231,348	124,629	1,386,810	138,267	115,280	44,706	397,956	725,335	52.3	661,475	266,208	162,382	361,935

(Table continued on second left-hand page)

HAULING FREIGHT on the

Cylinders, 28" x 31"
Steam pressure, 240 lb
Drivers, diam., 73"
Weight on drivers, 268,500 lb
Weight, engine, 419,500 lb
Weight, eng. & tend., 743,750 lb
Tractive force, 67,000 lb

LEHIGH & HUDSON RIVER RAILWAY

Three new mountain type locomotives, built by Baldwin, are now going into service on the lines of the Lehigh & Hudson River Railway. The new locomotives will be used between Allentown, Penna., and Maybrook, N. Y., in a joint Central Railroad of New Jersey and Lehigh and Hudson River fast freight operation, connecting the Baltimore & Ohio and New England. They will also serve between Port Morris, N. J., and Maybrook, N. Y., in expedited service to and from New England in connection with The Delaware, Lackawanna & Western Railroad.

The Baldwin Locomotive Works, Locomotive & Ordnance Division, Philadelphia, Pa., U. S. A. Offices: Philadelphia, New York, Washington, Boston, Cleveland, Chicago, St. Louis, Houston, San Francisco.

BALDWIN SERVES THE NATION WHICH THE RAILROADS HELPED TO BUILD

5TH WAR LOAN

BLW
THE BALDWIN GROUP

BALDWIN

LOCOMOTIVES

BALDWIN PRODUCTS FOR THE RAILROADS—Steam, diesel-electric and electric locomotives, Diesel engines, Hydraulic presses, Special railroad shop equipment, Testing machines and instruments, Steel tires and rolled steel wheels, Crane wheels, Connecting rods and other steel forgings, Steel castings, Springs, Metal plate fabrication, Boilers, Non-ferrous castings, Bending rolls, Plate planers, Dynamometer cars

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	Net railway operating income 1943
St. Louis Southwestern Lines	April	1,607	$5,138,843	$343,490	$5,611,936	$608,992	$556,258	$103,544	$1,354,125	$2,751,806	49.0	$2,860,130	$1,038,936	$784,912	$904,140
	4 mos.	1,607	19,920,559	1,229,462	21,674,622	2,480,010	2,074,826	377,536	5,304,836	10,742,067	49.6	10,932,555	4,122,636	3,040,439	2,984,010
Seaboard Air Line	April	4,174	7,663,492	3,780,748	12,178,238	1,346,870	1,540,181	174,938	3,716,382	7,310,349	60.0	4,867,889	2,467,889	1,936,609	3,845,990
	4 mos.	4,176	31,404,807	14,766,697	49,273,285	5,513,973	6,498,586	883,789	14,442,887	29,339,543	59.5	19,933,742	10,133,742	7,909,013	15,067,598
Southern Railway	April	6,513	15,326,758	4,765,433	21,350,423	2,496,632	3,391,029	235,414	6,005,617	12,796,847	59.9	8,553,576	3,093,771	2,685,511	2,457,761
	4 mos.	6,513	61,280,202	19,077,268	85,368,245	10,402,072	12,449,788	738,320	24,599,140	50,546,805	59.2	34,821,440	12,469,748	11,048,820	10,816,523
Alabama Great Southern	April	315	1,399,798	407,465	1,900,207	159,575	282,192	24,646	553,369	1,080,089	56.8	820,118	258,809	192,251	201,432
	4 mos.	315	5,336,396	1,661,482	7,378,547	670,376	1,048,638	79,668	2,217,306	4,258,070	57.7	3,120,477	924,156	709,032	874,805
Cincinnati, New Orleans & Texas Pacific	April	337	2,622,793	597,498	3,375,125	302,206	627,503	36,634	814,559	1,884,952	55.8	1,490,173	419,620	434,177	298,673
	4 mos.	337	9,571,941	2,559,676	12,749,233	1,246,719	2,397,188	123,809	3,231,103	7,350,820	57.7	5,398,413	1,544,426	1,724,486	1,854,122
Georgia Southern & Florida	April	397	312,526	222,230	589,427	78,677	76,203	2,614	177,692	356,194	60.4	233,233	102,971	61,411	73,213
	4 mos.	397	1,234,965	809,433	2,272,277	314,298	290,329	10,682	712,495	1,392,748	61.3	879,529	378,015	230,577	329,384
New Orleans & Northeastern	April	204	790,839	216,471	1,057,397	115,390	136,586	13,086	292,467	597,724	56.5	459,673	172,063	94,482	232,010
	4 mos.	204	3,233,367	791,301	4,217,478	532,992	443,312	41,393	1,279,924	2,441,640	57.9	1,775,838	691,914	353,631	563,444
Southern Pacific	April	8,263	26,622,035	9,450,492	39,258,534	5,857,210	7,381,045	495,644	11,991,658	27,978,067	71.3	11,280,467	3,938,066	2,816,634	5,651,107
	4 mos.	8,263	109,904,950	36,293,658	158,990,492	22,638,672	29,349,806	2,255,338	49,105,751	111,905,940	70.4	47,084,552	18,098,592	12,768,412	23,683,975
Texas & New Orleans	April	4,341	7,882,796	2,473,651	10,926,188	1,481,943	1,449,971	155,436	2,813,201	6,273,031	57.4	4,653,157	1,960,006	1,483,908	2,278,125
	4 mos.	4,341	32,846,688	9,401,073	44,619,652	5,735,539	5,272,596	605,028	11,225,996	24,359,111	54.6	20,260,541	7,938,681	5,874,396	9,652,162
Spokane, Portland & Seattle	April	944	1,899,471	179,138	2,187,187	513,954	193,297	15,779	635,765	1,422,113	65.0	765,074	660,829	522,648	495,121
	4 mos.	944	6,272,226	765,456	7,440,208	1,974,400	72,386	56,219	2,536,846	5,579,725	75.0	1,860,483	1,311,610	664,591	2,435,561
Tennessee Central	April	286	318,169	55,497	392,424	87,069	67,844	6,377	125,989	304,818	77.7	87,606	50,355	32,219	48,240
	4 mos.	286	1,412,447	249,897	1,748,122	359,657	257,969	28,451	544,780	1,264,940	72.4	483,182	268,857	190,537	222,085
Texas & Pacific	April	1,884	4,407,361	1,877,245	6,826,290	868,157	958,327	114,660	1,610,472	3,816,341	55.9	3,009,949	785,573	581,078	761,061
	4 mos.	1,884	17,263,101	7,014,752	26,561,976	3,493,250	3,939,007	436,171	6,181,654	15,173,708	57.1	11,388,268	2,964,398	2,251,758	3,032,997
Texas Mexican	April	162	188,980	738	217,330	25,687	16,340	4,299	50,561	105,820	48.7	111,510	84,718	72,933	30,202
	4 mos.	162	654,307	3,975	760,798	98,947	64,221	16,838	181,151	399,254	52.5	361,544	267,207	242,352	256,186
Toledo, Peoria & Western	April	239	430,078	132	434,938	38,637	21,704	24,499	80,351	179,088	41.2	255,850	222,180	200,482	219,189
	4 mos.	239	1,789,888	389	1,802,881	156,592	85,895	93,623	358,595	745,136	41.3	1,057,745	927,083	838,787	765,266
Union Pacific System	April	9,782	27,401,458	7,801,604	37,961,932	5,612,131	7,385,082	577,028	10,989,617	26,398,473	69.5	11,563,459	2,635,630	1,941,111	5,325,547
	4 mos.	9,782	114,305,612	30,003,807	155,935,321	21,646,352	30,031,798	2,302,029	46,060,246	107,175,252	68.7	48,760,069	14,085,789	10,920,047	18,213,591
Utah	April	111	108,362	.....	108,542	13,614	35,085	553	34,829	88,646	81.7	19,896	9,454	7,975	12,731
	4 mos.	111	521,544	.....	522,124	62,128	164,419	2,246	155,375	401,558	76.9	120,566	65,702	49,686	63,320
Virginian	April	657	2,277,566	9,145	2,369,892	256,490	231,648	21,841	488,305	1,330,790	56.2	1,039,102	494,102	593,485	593,252
	4 mos.	657	9,902,848	31,254	10,252,719	971,802	2,127,618	96,935	2,140,322	5,564,663	54.3	4,688,056	2,158,056	2,461,754	2,482,118
Wabash	April	2,393	6,506,591	882,873	7,889,677	1,053,634	1,005,667	173,074	2,394,860	4,883,362	61.9	3,006,315	1,118,404	725,738	1,113,759
	4 mos.	2,393	26,357,058	3,551,198	31,743,151	3,832,461	3,813,080	599,474	9,669,356	18,879,580	59.5	12,863,571	4,543,863	3,130,807	3,895,466
Ann Arbor	April	294	469,627	8,243	489,647	57,901	86,125	16,417	205,871	378,058	77.2	111,589	59,786	54,710	116,873
	4 mos.	294	1,869,138	28,755	1,935,853	234,075	336,023	62,584	809,041	1,486,415	76.8	449,438	240,435	223,376	287,633
Western Maryland	April	840	2,907,966	30,125	3,021,879	367,845	581,941	43,942	786,338	1,867,616	61.8	1,154,263	481,263	499,337	721,485
	4 mos.	840	12,150,828	124,359	12,627,241	1,388,975	2,284,961	174,669	3,405,274	7,605,173	60.2	5,022,068	2,511,068	2,621,379	2,988,758
Western Pacific	April	1,195	3,734,885	779,948	4,681,363	471,926	539,763	89,066	1,256,581	2,508,098	53.6	2,173,265	707,406	514,775	901,546
	4 mos.	1,195	13,147,655	2,454,753	16,172,335	1,977,537	2,237,194	327,871	4,845,889	9,952,614	61.5	6,219,721	2,443,996	1,895,291	2,750,955
Wheeling & Lake Erie	April	507	1,913,659	.....	1,978,026	246,502	375,072	40,486	601,368	1,315,188	66.5	662,838	107,567	268,359	320,268
	4 mos.	507	7,602,873	16	7,819,544	800,826	1,540,296	164,514	2,373,208	5,086,500	65.0	2,733,044	284,053	1,018,763	1,190,556